

EVALUATING GRADUATE STUDENT WRITING:
DO STUDENTS WRITE FROM A STRENGTHS PERSPECTIVE?

By

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Abstract

There is growing evidence supporting the use of strengths based approaches to serving families. Professionals can positively impact family outcomes by using strengths based language when interacting with families. The purpose of this study was to examine the nature with which graduate student clinicians write from a strengths perspective. Specifically, we explored whether first year graduate student clinicians in speech language pathology use strengths based/ability focused language when documenting observations of children's' communication and behavior during play. We created videos of typically developing children in natural environments and gathered narrative writing samples broken down by phrase (N = 693 phrases) from graduate student clinicians. Students (N =29) participated in each of two conditions (A- general prompt; B- clinic prompt). Using a coding system developed by the research team, we analyzed the nature with which the student clinicians included strengths based language in their written documentation. Our findings indicated that the student clinicians in the current study generally used more neutral, ability focused language (than deficit based language) in their writing. However, when the student clinicians were led to believe the child in the video was coming to the clinic for an evaluation, they used less strengths based language. Findings from this study provide valuable information about how first year graduate students write when documenting observations of child behavior and communication and may serve as a guidepost for how we design academic training programs with respect to clinical documentation. Additionally, these findings emphasize the importance of ensuring that clinical training mentors use strengths based practices across training sites.

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Introduction and Literature Review

The idea of “family centered care” first appeared in the 1950’s (Saleebey, 2009; Weick, Rapp, Sullivan, & Kisthardt, 1989). Over the next four decades the definition and understanding of “family centered care” has evolved first through the Healthy People initiative (Healthy People 1990, 2000, 2010 and 2020) and through the visions of national programs and organizations such as the American Occupational Therapy Association, the American Speech-Language Hearing Association, the Association of University Centers on Disabilities, Family Voices, Inc., the Committee on Hospital Care & Institute for Patient and Family-Centered Care, and the National Center for Family Centered Care (Family Voices, 2007; United States. Public Health Service. Office of the Surgeon General & United States. Public Health Service. Office of the Assistant Secretary for Health, 1979). Although no one universal definition of family centered care exists, there appears to be agreement among these organizations as to the core elements constituting family centered care. Included among these are:

- Respect for all team members (including families as team members)
- A focus on family strengths and resources
- Cultural competence
- A balanced relationship between providers and families

(American Occupational Therapy Association, 2010; American Speech-Language Hearing Association, 2008; Committee on Hospital Care & Institute for Patient and Family-Centered Care, 2003, 2012; National Center for Family Centered Care, 1989).

These primary elements of family centered care have emerged as the core principles of strengths based practices and serve as the basis for several emerging fields of study. Some of these include: the Strengths Perspective (Saleebey, 2009), Positive Psychology (Seligman &

Csikszentmihalyi, 2000), and Positive Deviance (Lindberg & Clancy, 2010). Each of these fields has growing evidence for the use of strengths based practices when serving families with documented outcomes of improving the balance in the provider-family relationships (Gallagher, Rhodes, & Darling, 2004), improving family perceptions of their child with special needs (Carlson, Armitstead, Rodger, & Liddle, 2010; King et al., 2006; Law et al., 2003), improving parent child relationships (Steiner, 2011), positive effects on challenging behavior, academics and family functioning (Kuhlthau et al., 2011; Kuo, Bird, & Tilford, 2011; Stormshak, Connell, & Dishion, 2009), improvements in self-esteem and positive affect (Wood, Linley, Maltby, Kashdan, & Hurling, 2011), and improving nutrition in young children and overall quality of health care in medical institutions (Bradley et al., 2009; Mackintosh, Marsh, & Schroeder, 2002).

One particular study (Steiner, 2011) analyzed the words early intervention providers used when describing children to their parents. In one condition, providers used strengths based language, or words/language that emphasized the child's strengths, abilities and potential. In the second condition, providers used deficit based language, or words/language that described behaviors from a context of something being "wrong". Such language emphasizes "areas of need" that may serve as potential intervention targets. Steiner found the use of a strengths based approach improved parent affect toward their children and strengthened parent child interactions. As a result, Steiner concluded that such approaches may contribute to alleviating stress and help families more easily cope with the stress that comes with raising a child with a disability.

Given the effect that a provider's words can have on how parents relate to their children, Braun, Dunn, and Tomchek (2014a) explored the utilization of strengths based practices in the context autism diagnostic reports from interdisciplinary teams. Findings from their pilot study indicated that interdisciplinary clinicians in the study did not write from a strengths perspective.

They discussed the need to better promote strengths based practices at all three levels of service delivery (Third Party Payer Systems, Practice and Pre- and Post-Service Training). The current study expanded upon these findings by exploring the extent to which graduate student clinicians in speech language pathology write from a strengths perspective.

Purpose, Rationale and Hypotheses

Strengths based approaches to serving families (emphasizing strengths and resources rather than resolving deficits) provide a greater positive impact on family outcomes (Dunst & Trivette, 2009; Dunst, Trivette, & Hamby, 2007; Early & GlenMaye, 2000; Saleebey, 2009; Weick, Rapp, Sullivan & Kisthardt, 1989). Despite this mounting evidence supporting the use of strengths based practices, providers continue to operate using more traditional deficit based practices. Saleebey (2009) suggests that this is most likely due to persistent deficit based thinking within service delivery systems. Despite these systems ascribing to uphold family centered principles including strengths based practices, initial eligibility and continued access to the systems requires identification and description of deficits. Adoption and implementation of strengths based practices requires change within each of the various levels of the service delivery system (e.g. Third Party Payer Systems, Practice and Pre/Post Service Training)(Braun, Dunn, & Tomchek, 2014b). The current study focused on one component of the service delivery system, Pre-Service Training.

This study explored the nature with which graduate student clinicians write from a strengths perspective when documenting observations of children's communication and behavior during play. We gathered information about the extent to which graduate student clinicians write using strengths based language under two different conditions. We addressed the following research questions:

- Do graduate students write from a strengths perspective? That is, when writing up observations of a child's communication and behavior, do students write using language that is written from an ability perspective (e.g. emphasizes a child's strengths, abilities and potential) with minimal interpretation?
- Does knowing that potential concerns may exist regarding a child's development influence whether students write more from a deficit perspective (e.g. emphasizes a child's areas of need or focusses on problem behaviors) when documenting communication and behavioral observations?

Methods

Study Design, Participants and Setting

Table 1 provides a visual representation of the study design. This descriptive and comparative study analyzed the nature with which first year graduate students in speech-language pathology write from a strengths perspective. We recruited 29, first year graduate students (all female, 28 white, 1 "more than one race") in speech-language pathology (from one university) and randomly assigned each student to one of two groups. Each student participated in two conditions (A and B) which involved watching a video and writing their observations about a child's (in the video) communication and behavior (see below for specific aspects of each condition). Participants watched the videos in a computer lab in the Department of Hearing and Speech at a University in the Midwest. The primary investigator then coded the writing samples (see below for details regarding the coding procedures) and completed the data analysis.

Procedures

Protection of Human Subjects. For this study, we obtained approval from the university's Human Subjects Committee/Institutional Review Board. We obtained informed consent for each parent and child in the eight videos used in the study. We also obtained informed consent from the graduate students who participated in the study. Once enrolled in the study, students were assigned a participant number to protect their identity.

Video samples. We created eight, two and a half minute video clips of typically developing children playing with a parent in their home (or other natural environment). The eight children in the videos (5 male, 3 female) were between the ages of three and five years old. They were recorded in their homes (7) or an in-home daycare (1), while playing with one of their parents (2 fathers, 6 mothers). For the purpose of this study, we defined a “typically developing” child as a child whose parents and pediatrician did not and/or have not had any concerns regarding the child's development. To capture the parents “playing” with their child, we asked the parents to engage in a back and forth activity with their child using pre-selected, age/developmentally appropriate toys that the researcher supplied to the families just before recording (see Appendix A for the selection of toys). Because we hoped to capture both communication and behavior, we avoided more sedentary activities like reading a book. We randomly assigned each video to one of two video sets (Video Set 1 or Video Set 2).

Data collection. The primary investigator recruited and obtained informed consent from all participants for the study. We enlisted a graduate research assistant to aid in the data collection and data entry process. Data collection included facilitation of study participants watching the videos and writing their observations. The research assistant was blind to the study and given a script (Appendix B). In order to limit the amount of writing each participant could submit for each video, we created a Word Document Form with text boxes limited to a half page

single spaced or a full page double spaced. We provided this document electronically to each participant and asked them to write their observations immediately following their watching each video. The research assistant saved each document to a portable external hard drive which is stored in the primary investigator's office under lock and key.

We used the script (Appendix B) to generally introduce the activities of this study as well as prompt the participants for each condition. In Condition A (the General Prompt Condition) either the research assistant or the lead researcher instructed the students to watch the first video and then write up their observations of the child's communication and behavior. After completing their write up for Condition A, students participated in Condition B. In Condition B (the Clinic Prompt Condition), the research assistant or the lead researcher told the students that the child in the second video was referred to the clinic for an evaluation, to watch the video and write up their observations of the child's communication and behavior (just as in the General Prompt Condition).

Because we were looking to see if differences exist across conditions, we employed an internal crossover design in assigning videos to students (see Table 1). To do so, students in Group 1 watched a video from Video Set 1 in Condition A (General Prompt Condition) and a video from Video Set 2 in Condition B (Clinic Prompt Condition). Conversely, students in Group 2 watched a video from Video Set 2 in Condition A (General Prompt Condition) and a video from Video Set 1 in Condition B (Clinic Prompt Condition). This allowed us to ensure that any observed differences across conditions were, in fact, due to the condition and not a particular video. This also helped determine if one particular video was responsible for biasing student writing.

Coding the data. We transferred written samples, broken down by phrase to one Excel worksheet with each phrase separated from the next on a subsequent line. To code the data, we randomly sorted the entire sample of all phrases from all writing samples so as not to provide a context that may have influenced ratings for subsequent or previous phrases. As an additional protection against rater bias, the rater was blinded to the participant ID and condition of each phrase.

Once randomly sorted, the primary investigator assigned a code (see Figure 1 for coding algorithm) to each of the phrases in the sample. To ensure reliability of the final coding, a second member of the research team independently coded every fifth data point (20%) of the randomly sorted sample of phrases and we used an 80% agreement criterion. Once coded, we then re-sorted the sample to its original order so as to analyze the data by video and condition.

Operationalizing definitions of strengths and deficit based language. To operationalize the definition of strengths based language and what it means to write from an ability perspective, the researchers used the definitions and reliable coding system established by Braun et al. (2014a) (see Figure 1). Braun et al. (2014a) used this coding system to rate phrases from anecdotal behavioral observation sections of interdisciplinary autism diagnostic reports. To establish reliable definitions/codes, Braun et al. generated baseline definitions, and then recruited a cohort of eight interdisciplinary doctoral students (most of whom were practicing professionals) to test the definitions/codes by rating several samples of clinical reports. After each round of practice ratings, the definitions/codes were revised based on cohort feedback and data analysis. They also recruited three parents of children with special needs to complete one round of practice ratings and gathered additional anecdotal feedback to inform the final iteration of definitions/codes. They analyzed the data of the final sample of ratings from the eight provider

cohort using an Intra-class Correlation Coefficient. They found an ICC = .801 indicating strong overall reliability of the final definitions and coding system. Table 2 provides coded examples of what writing may look like in both a strengths based sample and a deficit based sample.

Data Analysis

To answer question one and determine whether or not student clinicians generally write from a strengths perspective, we first calculated the frequency of each unique code (*D*, *IN*, *I+*, *I-*) across the entire sample of phrases. We then completed a Chi Square analysis comparing our observed frequencies of codes to our expected frequencies of codes which reflects ability based writing. This allowed us to determine if significant differences existed across the frequency distributions of the codes in our entire sample. In determining the expected frequency for each individual code, we believe that the expected values must not be based on chance probability (25% for each code) alone. Instead, we believe that writing from a strengths perspective means using significantly more positive (*I+*) and neutral (*IN* and *D*) statements than negative statements (*I-*). Therefore, we used the following expected frequencies as used by Braun et al. (2014a) in their pilot study examining the nature with which professionals write from a strengths perspective in autism diagnostic reports: 25% *I-*, 37.5% *I+*, 18.75% *IN* and 18.75% *D*. These values suggest that we would expect 75% of the phrases in strengths based writing samples to be positive or neutral in their nature (*D*, *I+*, *IN*) and 25% of the phrases in the sample to be negative in their nature (*I-*).

Because an omnibus Chi Square analysis does not identify which category or categories are responsible for significant differences (when significant differences exist), we also completed One Sample Binomial post hoc comparisons. In doing so, we made pairwise comparisons of the distribution of each unique code. Having four unique codes required six pairwise comparisons.

To account for these multiple analyses, we used a Bonferroni adjustment ($.05/6 \text{ tests} = .0083$) in the post hoc analysis.

To address research question two and determine if knowing potential concerns exist about a child's development influences whether or not students write more or less from a strengths perspective, we first calculated the frequency of each unique code for each student participant in each condition. We then completed a Multivariate Analysis of Variance (MANOVA) where condition (A and B) was the independent variable and the frequency for each unique code (D, I+, I-, IN) were the dependent variables. Because we did not have sufficient power to detect differences using this 4 X 2 factorial design, we combined the D, IN, and I+ codes to form one category (which we called "Strengths"), resulting in a 2 X 2 factorial design. We also completed post hoc pairwise contrasts to determine which codes were different across conditions.

To further understand the differences in writing across conditions, we also completed an independent samples *t*-test between the two conditions to determine if the writing samples were longer in one condition. Additionally, we completed Chi Square analyses of the frequency distributions for each condition (using similar expected values) as well as Binomial Pairwise Comparisons of each code across each condition (four pairwise comparisons). Again, to account for multiple analyses, we used a Bonferroni adjustment ($.05/4 \text{ tests} = .0125$) in this analysis.

Results

Table 3 provides frequency data of the observed and expected frequencies of the entire sample. Percentages of each observed/actual code were as follows: 35% of statements were Interpretive, Positive (I+); 29% were Descriptive (D); 18% were Interpretive, Negative (I-); and 17% were Interpretive, Neutral (IN). To ensure reliability of the coded data, a third member of

the research team independently rated every fifth data point (20%) of the randomly sorted sample of 693 total phrases (20% = 138 phrases). We established an 80% agreement criterion; the two researchers agreed on 129 of the 138 phrases (93%) selected for reliability.

The Chi Square analysis of the entire sample indicated a significant difference $\chi^2(3, N = 693) = 49.82, p < .001$ in the actual distribution of codes from the expected distribution. One Sample Binomial Post Hoc comparisons are presented in Table 4. These findings indicate that D and I+ coded phrases occurred significantly more than the IN and I- coded phrases, though there was not a significant difference between the distributions of I- and IN statements. Of the entire sample, 18% of the phrases were deficit based (I-) and 82% of the phrases were written from a strengths perspective (D, I+, or IN). A post-hoc power analysis of these findings indicated strong power (Power = 1.0) with moderate effect size ($\omega = .301$).

Findings from the omnibus MANOVA indicated significant multivariate effects in coding between the two conditions $F(1, 2) = 4.179, p = .020$. These findings indicated that writing samples in the Clinic Prompt condition (Condition B) included more negative statements and fewer strengths based statements than in the General Prompt condition (Condition A). A post hoc pairwise contrast analysis indicated that only the strengths based language comparison met statistical significance ($F(1, 1) = 6.561, p = .013$).

An independent samples *t*-test indicated that the students did not provide significantly more written documentation in one condition than the other ($t(56) = 1.42, p = .160$). If condition were to have no effect on how a student writes, we could reasonably expect similar frequency distributions of coding across conditions. Therefore, using our same expected frequency distribution, we completed Chi Square analyses for each condition to determine if differences existed in each condition. Frequency distribution data for each condition are presented in Table

5. The Chi Square analyses from each condition were significant (General Prompt Condition: $\chi^2(3, N = 373) = 53.00, p < .001$; Clinic Prompt Condition: $\chi^2(3, N = 320) = 13.45, p = .004$) indicating potential differences in student writing across conditions. To further understand these potential differences, we completed Binomial Pairwise comparisons of each code across the two conditions. Findings from these comparisons are also presented in Table 5 and indicate that students used fewer D, IN, and I+ statements (strengths based language) and more I- statements (deficit based language) in the Clinic Prompt condition than in the General prompt condition. However, only the I- comparison reached statistical significance. Figure 2 provides a graphical representation of these findings.

Discussion

The effectiveness of strengths based practices is well documented (Bailey, Raspa, & Fox, 2012; Blundo, 2009; Gardner & Toope, 2011; Kuhlthau et al., 2011; Saleebey, 2009; Weick, Kreider, & Chamberlain, 2009). Steiner (2011) found significant improvements in family outcomes when providers of early intervention services (not driven by diagnosis) used strengths based language (as compared to deficit based language) to describe children to their caregivers. Braun et al. (2014a) expanded upon these findings by analyzing the language interdisciplinary clinicians use when writing autism diagnostic reports. They found that experienced clinicians used significantly more deficit based language than strengths based language in their reports. The current study also examined the use of strengths based language in written documentation, though participants in this study were first year graduate students in speech-language pathology rather than experienced clinicians on interdisciplinary autism diagnostic teams. Another key difference was that the written documentation analyzed in this study was in regards to typically developing children rather than children suspected of having an autism spectrum disorder or

other developmental disorders. We attempted to account for this in the current study by creating a second condition. In the Clinic Prompt condition, the researchers led the student participants to believe that the children in the videos were coming to the clinic for an evaluation. Our goal was to determine if knowing that potential concerns about the child existed (Clinic Prompt condition) influenced the students' writing.

Results from this study indicate that, overall, first year graduate students from the sample tended to write using neutral, ability focused language (Strengths codes, I+, IN, D) rather than deficit focused language (Deficit code, I-) when describing child behavior and communication. When comparing writing samples across conditions, however, we found that students in our study used significantly less strengths based language (I+, D, IN, $F(1, 1) = 6.561, p = .013$) in the Clinic Prompt condition. Although we did not find statistically significant differences in the use of deficit based language between conditions (I-, $F(1, 1) = 3.637, p = .062$), we saw an increase in the average amount of deficit based language in the Clinic Prompt condition.

One possible explanation for the use of more objective and positive language in our study (as compared to Braun et al., 2014a) could be that all of the child participants in this study were typically developing. Perhaps their strengths and abilities were more obvious and easily detected than a child whose development is not typical. It is also possible, though, that the graduate student participants used learned and intentional behaviors when writing from a strengths perspective. That is, the students understood and applied the theoretical underpinnings of strengths based practices within their writing. However, because of their limited experience, the student clinicians may have yet to learn how to recognize as well as document behaviors associated with deficit conditions. As a result, the students may tend to write more objectively using less interpretive language. Regardless, these findings suggest that prior to formal clinical

training (or after only minimal exposure to clinical training experiences), graduate students in this study wrote using language that was either neutral or positive in its nature significantly more than they used language that was negative or deficit focused. This finding is important because regardless of the participants' understanding of strengths based practices, graduate student writing samples in this study reflect an ability to write from a strengths perspective.

If findings from Braun et al. (2014a) reflect the actual current state of strengths based writing in clinical practice, yet first year graduate students enter graduate school writing from a strengths perspective, we must be mindful of the training and mentorship experiences of graduate students in clinical training. Although the idea of “strengths based practices” is not a new concept, this field of study is still considered to be in the early stages of adoption within the target field of speech-language pathology. It is likely that many practicing professionals have not received formal training on strengths based practices and therefore do not implement such practices. That is not to say that professionals have not heard of, nor do they embrace the idea of strengths based practices. However, applying the strengths perspective in our everyday practice is challenging, particularly when significant barriers continue to hinder the adoption such practices (Braun et al., 2014b). These barriers include a persistent focus on child and family deficits at each of three primary levels of service delivery (Systems level, Practice level and Pre- and Post- Service Training levels). Reimbursement systems require documentation of deficit behaviors with little to no focus on family strengths and resources. In practice, professionals often use standardized testing to identify problem areas rather than strengths and many assessment tools are not ecologically valid. Training often focuses on pathology and diagnosis rather than identifying strengths and resources. Additionally, families often seek professional services based on concerns for their child which places the focus on deficits.

Eliminating these barriers will require adoption of strengths based practices (by professionals and families alike) to include a better understanding of the core components of strengths based practices and why deficit based practices continue to be the primary method of service delivery. Although strengths based services are becoming recognized as best practice, until these practices are fully understood and adopted at each of the primary levels of service delivery, we cannot assume that strengths based approaches are being utilized. Some might argue that writing from a strengths perspective is contradictory to how systems require documentation for reimbursement of services. Braun et al. (2014b) address this point by indicating that strengths based approaches do not suggest we ignore deficit behaviors and conditions. Rather, by shifting the focus of care from deficit conditions to individuals and their abilities, providers draw upon existing strengths and resources to more naturally support identified impairments. This model of care better reflects the evidence about strengths based practices (Braun et al., 2014a).

Findings from this study can guide future pre- and post-service training and development of active learning strategies aimed at promoting strengths based practices. Using our coding algorithm as well as our expected values from our chi square analysis may serve as a guidepost for those just learning to write from a strengths perspective. Professionals could use our coding algorithm (see Figure 1) to generate self-reflective questions about their writing. For example, “is my writing objective and free of interpretation,” or “have I written in a manner that reflects a neutral and positive point of view?”

Limitations and Conclusions

We acknowledge several limitations of this study. This study occurred at one university and involved graduate students from one field of study. This limits the generalizability of findings to graduate students from other institutions in the same field as well as graduate students

from other health professions. In the future, we hope to replicate this study at other institutions as well as in other discipline programs. Future research might also include gathering information from student participants as well as from academic faculty and licensed professionals about their knowledge and experience in strengths based practices. Completion of a follow up study after the participants have had clinical training to ensure use of strengths based writing continues is also recommended. Additionally, future studies might include writing samples from a variety of clinical settings to determine if certain clinical settings are more apt to influence writing from a strengths perspective.

Another limitation to interpreting the findings of our study is that since little data exists about strengths based writing, no clear baseline data exists with respect to the current state of how graduate students write. Braun et al. (2014b) explored how professionals in one type of clinic (autism diagnostic clinics) write, but their sample did not include graduate student writing. We chose to use their criteria for the expected outcome in the Chi Square analyses because it is the only existing data (to our knowledge) on the topic. We acknowledge that using the expected values from Braun et al. (2014a) is a starting point and may not fully represent the actual state of how graduate students write.

We recognize that the power in the current study (.737) was only strong enough to detect statistically significant differences in some aspects of our analyses. Although we considered recruiting from additional institutions to improve the power of our study, doing so would have added additional subject variables that would confound interpretation. In the future, we hope to replicate this study across multiple institutions, across years of study and across disciplines.

In conclusion, findings from this study provide valuable information about how first year graduate students in speech-language pathology write when documenting their observations of

child communication and behavior. This information may be helpful in several ways. Writing from a strengths perspective is one way to demonstrate an understanding of strengths based approaches. Given that the evidence for strengths based approaches to serving families is still somewhat new within some discipline fields, students may be entering graduate school with varying degrees of knowledge and understanding of strengths based approaches. Therefore, this study may serve as a baseline understanding of students (in speech language pathology) perceptions of strengths based approaches to serving families, specifically in the context of writing. Findings from this study may be a guidepost for how we design academic training programs with respect to clinical documentation. Additionally, our findings highlight the importance of ensuring clinical training mentors expertise in the use and application of strengths based practices across training sites. Finally, these findings emphasize the importance of providing graduate students with the knowledge and preparation to share the value of using strengths based approaches with training mentors.

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Table 1

Study Design

Group	Condition A- General Prompt “Watch the video and write a brief paragraph summarizing your observations about the child’s communication and behavior.”	Condition B- Clinic Prompt “This is a child who is coming to the clinic for an evaluation. Watch the video and write a brief paragraph summarizing your observations about the child’s communication and behavior.”
Group 1 12 1 st Year Students Students watch one video in each condition (A & B)	Each student will be randomly assigned to one video from Video Set 1*	Each student will be randomly assigned to one video from Video Set 2*
Group 2 12 1 st Year Students Students watch one video in each condition (A & B)	Each student will be randomly assigned to one video from Video Set 2*	Each student will be randomly assigned to one video from Video Set 1*

*Each video set contained four videos of children engaging in some play activity with a parent or guardian. All of the children in the videos were typically developing with no prior developmental concerns identified by their parents or primary care physician. . This internal crossover design allowed us to identify any particular video that may influence the students to write from more of deficit perspective.

Table 2

Suggestions for Strengths Based Writing

Doesn't Look Like...	Looks Like...
He was very impulsive in the waiting area. [I-]	He hit his sister twice and threw a book at his mother [D]
Daisy had a great deal of difficulty sitting during the evaluation. [I-]	Throughout the evaluation, Daisy frequently got up from her seat. [IN]
During the evaluation, Raphael had poor eye contact [I-]	During the evaluation, Raphael did not make eye contact with the examiner [D]
Social interactions were difficult.[I-]	Bob responded to questions and comments. He did not make comments or ask the examiner questions. [D]
He maintained good eye contact with the examiner, but was very limited in his other nonverbal skills. [I-]	He maintained good eye contact with the examiner. [I+] He used several conventional gestures, but did not use descriptive gestures. [IN] He used happy and sad facial expressions on several occasions. [IN]

(Braun et al., 2014a)

Table 3

Total Sample Frequency Data

	Expected (%)	Actual (%)
D	130 (18.75)	199 (29)
IN	130 (18.75)	121 (17)
I+	260 (37.5)	245 (35)
I-	173 (25)	128 (18)
Total*	693 (100)	693 (99)

**Indicates significant global effects $\chi^2(3, N = 693) = 49.82, p < .001$*

Table 4

Binomial Pairwise Comparisons from Entire Sample

Pair	p
D/I+	.033
D/I-	<.001*
D/IN	<.001*
I+/I-	<.001*
I+/IN	<.001*
I-/IN	.704

*Indicates significant difference at $p < .008$ (Bonferroni Correction = $.05/6$ tests = $.008$)

Table 5

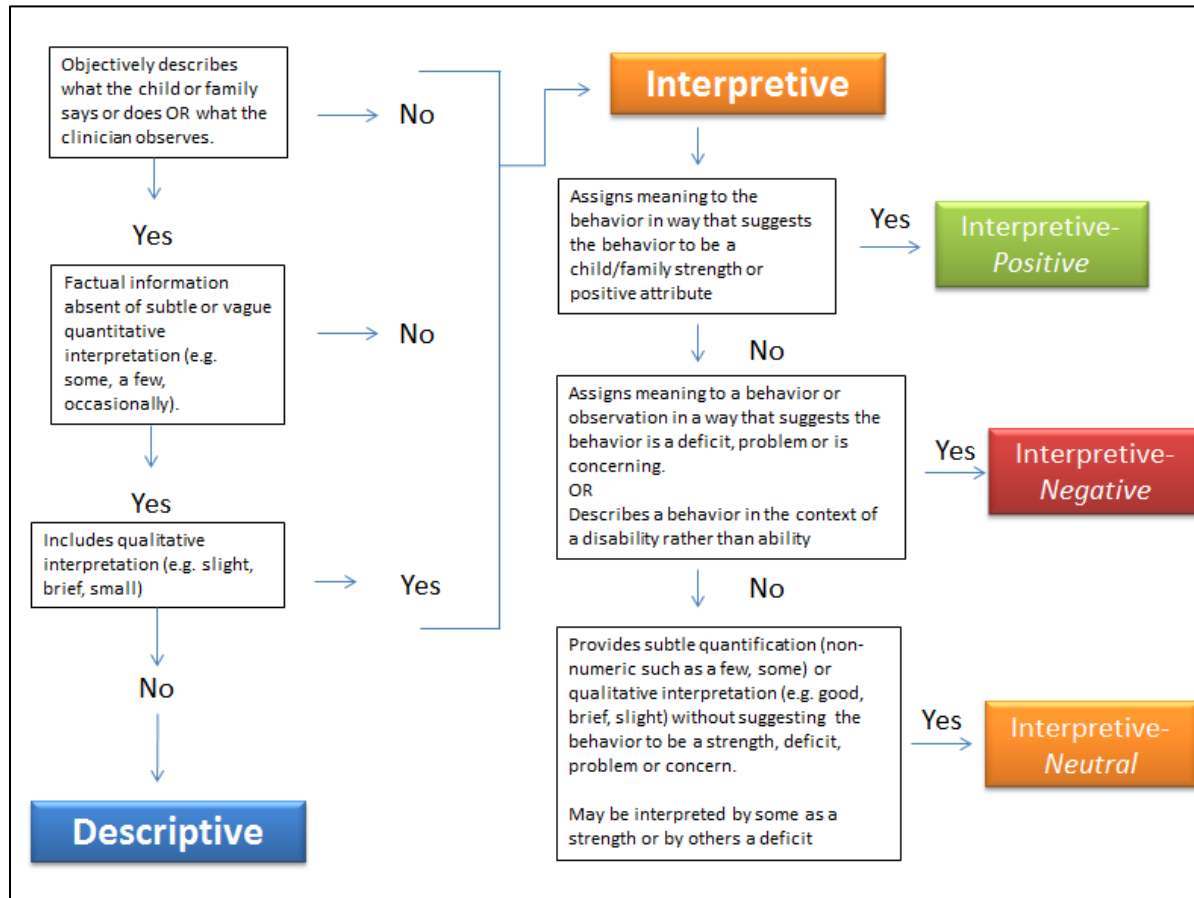
Frequency Data by Condition

	Condition A (%)	Expected*	Condition B (%)	Cross Condition Binomial Pairwise Comparisons <i>p</i>
D	115 (31%)	18.75%	84 (26%)	.033
IN	71 (19%)	18.75%	50 (16%)	.069
I+	141 (38%)	37.5%	104 (32%)	.021
I-	46 (12%)	25%	82 (26%)	.002**
Total	373		320	

*Because each condition contained different total raw frequencies we used percentages.

**Indicates significant difference at $p < .013$ (Bonferroni Correction = $.05/4$ tests = $.013$)

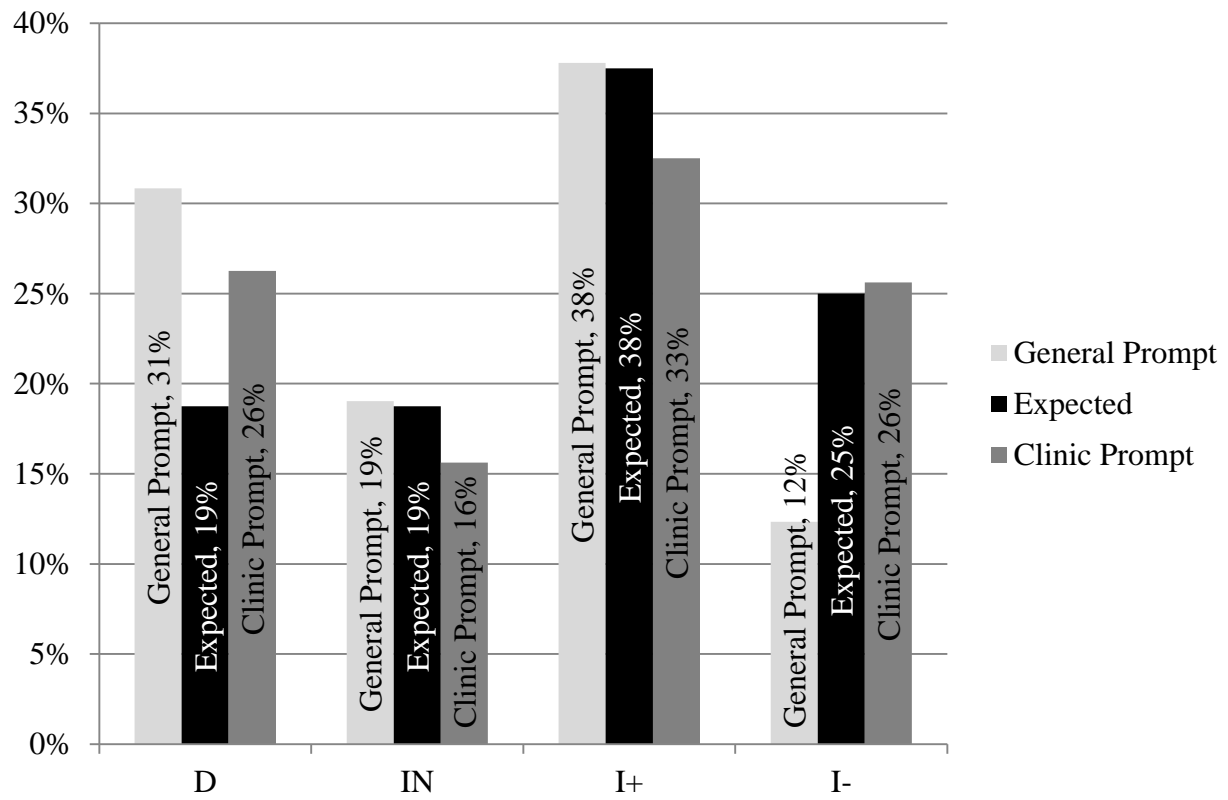
Figure 1 *Coding Algorithm*



(Braun et al., 2014a)

Figure 2

Frequency Data by Condition



Appendix A

List of Toys for Videos of Children Playing with their Parents

- Remote controlled school bus (without batteries)
- UNO Moo game
- Small red playground ball (8 inches)
- Chasing Cheeky, electric ring toss game
- 4 wooden trains and 8 train track pieces that form a circle when put together
- Stuffed Teddy Bear
- Bag of Wooden Letter Blocks
- Baby doll
- Plastic plates, cups, silverware, and teapot

Appendix B

Script for Data Collection

Research Assistant (RA): “We are gathering baseline data about student writing. You will watch two videos. After watching each video, write a brief paragraph about each child’s communication and behavior.” This is not an exercise in language sampling or taking sound inventories. Simply write a paragraph about each child’s behavior and communication skills.

RA prepares the video

“Watch the video and write a brief paragraph summarizing your observations about the child’s communication and behavior.”

Participant watches the video.

“Now write a brief paragraph summarizing your observations about the child’s communication and behavior.”

RA prepares second video

“This is a child who is coming to the clinic for an evaluation. Watch the video and write a brief paragraph summarizing your observations about the child’s communication and behavior.”

Participant watches the video.

“Now write a brief paragraph summarizing your observations about the child’s communication and behavior.”

Some Potential/Anticipated Participant Questions and Responses

Can we take notes during the video?	Yes. You may take notes, but are not required to do so nor will you be required to turn in those notes (outside of the write up itself).
Do we have to use all of the space provided?	No. If you can summarize your observations in less than the provided space, that is OK.
What if we need more space than the space provided?	You will not be able to use more than the allotted space. You will need to keep your write ups limited to half a page single spaced or a whole page double spaced.
Will you give us more specific instructions?	The instructions are simply to watch the video

	and write up your observations of the child's communication and behavior.
May we watch the video a second time to make sure we got everything?	No. Each student is to watch each video only once and write up their findings.
May we pause the video during our observation in order to take notes so that we don't miss anything?	No. Each student is to watch the video and write up their observations of the child's communication and behavior.
May we rewind the video if we think we missed something?	No. Each student is to watch the video and write up their observations of the child's communication and behavior.
Should we be collecting a language sample or an inventory of the sounds the child uses?	This is not an exercise in language sampling or collecting sound inventories. Simply write a paragraph about each child's behavior and communication skills.

Appendix C

Definitions and Coding Conventions

Term (Code)	Definition	Example
<i>Descriptive (D)</i>	Objectively describes what the child or family says or does OR what the clinician observes.	The child entered the room and sat down at the table.
	Factual information absent of subtle or vague quantitative interpretation (e.g. some, a few, occasionally).	The child's mother and stepfather accompanied him to the appointment
	Includes no qualitative interpretation (e.g. slight, brief, small)	Tommy kicked his mother three times.
	Distinctly reports what the family says about child, (e.g. "Max's mother reports that he is generally a happy child.")	Jason's mother reports that he is often shy and slow to warm up. (While the mother's comments may suggest I-, this is descriptive because it is describing what a parent said.)
<i>Interpretive</i>	Describes a child's behavior or clinician observation in a way that subjectively assigns meaning or interprets the behavior to mean something.	Matt frequently looked to the examiner for comfort.
	May include subtle quantitative (e.g. some, a few, several) or qualitative interpretations (e.g. small, brief, strange, unusual)	Keenan threw his pencil to get out of his work.
	Interpretive statements often include one term that differentiates it from a descriptive statement. (For example: Julie willingly participated in all assessment activities. "willingly" makes this statement interpretive.)	It was difficult to engage Evan in any of the assessment activities.
		On some occasions, Michael used good eye contact.
		Steve was easily redirected.
<i>Interpretive Positive (I+)</i>	Assigns meaning to the behavior in way that suggest the behavior to be a child/family strength or positive attribute	Angela easily transitioned from the waiting room to the assessment room.

	Describes the child or family from an ability perspective.	<p>Julie was easily redirected to tasks.</p> <p>Anna was polite and cooperative throughout the assessment.</p> <p>Jenna willingly participated in all activities of the assessment.</p>
<i>Interpretive Negative (I-)</i>	<p>Assigns meaning to a behavior or observation in a way that suggests the behavior is a deficit, problem or is concerning.</p> <p>OR</p> <p>Describes a behavior in the context of a disability rather than ability</p>	<p>...although her overall rate of social initiation was significantly decreased.</p> <p>...but rarely directed verbalizations toward her parents or the examiners.</p> <p>Emily was generally unable to follow simple directions.</p> <p>Jamie was not observed to use words throughout the assessment. (A strengths based way to restate this would be: Jamie communicated through the use of nonverbal communication and her assistive device.)</p>
<i>Interpretive Neutral (IN)</i>	<p>Provides subtle quantification (non-numeric such as a few, some) or qualitative interpretation (e.g. good, brief, slight) without suggesting the behavior to be a strength, deficit, problem or concern.</p> <p>May be interpreted by some as a strength or by others a deficit</p> <p>May be interpreted as either</p>	<p>Michael cried to express that he was sad.</p> <p>He exhibited a partial smile during the balloon activity.</p> <p>His language was a combination of meaningful speech and repeated words.</p>

positive or negative or may be interpreted as neither positive nor negative. May include language that to some is technical jargon and to others is professional language, but does not assign suggest a deficit or strength (e.g. mixing word and word approximations with jargon and babble.)

(Braun et al., 2014a)

Appendix D

Demographic Information Form for Graduate Student Participants

ID #: _____

First Name _____ Last
Name _____

Age: _____ **Gender:** M F

Race (check one):

- ☐ **White** refers to people having origins in any of the original peoples of Europe, the Middle East, or North Africa.
- ☐ **Black or African American** refers to people having origins in any of the Black racial groups of Africa.
- ☐ **American Indian and Alaskan Native** refer to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment.
Tribe: _____
- ☐ **Asian** refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent (e.g. Asian Indian).
- ☐ **Native Hawaiian and Other Pacific Islander** refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- ☐ **More than one race** includes individuals who identify with two or more racial designations.
- ☐ **Unrecorded** is included for individuals who are unable to identify with the categories.

Ethnicity (check one):

Hispanic is an ethnic category for people whose origins are in the Spanish-speaking countries of Latin America or who identify with a Spanish-speaking culture. Individuals who are Hispanic may be of any race.

- ☐ Hispanic
- ☐ Non-Hispanic
- ☐ Unrecorded

Primary Language

Do you speak a language other than English at home?

- ☐ Yes, Spanish
- ☐ Yes, another language, please identify: _____
- ☐ No

If yes how well do you speak English? (If no, do not respond)

- ☐ Very well

- ☐ Well
- ☐ Not well
- ☐ Not at all

Personal relationship with Disabilities:

Is the trainee a ... (Check all that apply)

- ☐ Person with a disability
- ☐ Person with a special health care need
- ☐ Parent of a person with a disability
- ☐ Parent of a person with a special health care need
- ☐ Family member of a person with a disability
- ☐ Family member of a person with a special health care need
- ☐ Unrecorded

Do you have any professional work experience prior to enrolling in graduate school? Y N

If yes, please explain:

Academic Degree/Credential Achieved (highest degree earned):

Program of Study: _____

Academic Level (Current enrollment abbreviation, e.g., status, not highest degree earned)

Degree Program (provide appropriate

BA, MA, PhD, DDS, PharmD, etc.)

- ☐ Non Degree
- ☐ Undergraduate
- ☐ Masters
- ☐ Doctoral
- ☐ Post Doctoral
- ☐ Other

Enrollment Status: (Check one)

- ☐ Full-Time Student
- ☐ Part-Time Student

Discipline: (Check one)

- ☐ Audiology
- ☐ Biological Sciences
- ☐ Dentistry-Pediatric
- ☐ Dentistry-Other
- ☐ Disability Studies
- ☐ Education/Special Education
- ☐ Education: Administration
- ☐ Education: Early Intervention/Early Childhood
- ☐ Education: General Education
- ☐ Epidemiology
- ☐ Family Studies
- ☐ Family/Parent/Youth Advocacy
- ☐ Genetics/Genetics Counseling
- ☐ Gerontology
- ☐ Health Administration
- ☐ Human Development/Child Development
- ☐ Interdisciplinary
- ☐ Law
- ☐ Liberal Arts & Sciences, Humanities, & General Studies
- ☐ Medicine-Adolescent Medicine
- ☐ Medicine-Developmental-Behavioral Pediatrics
- ☐ Medicine-Neurodevelopmental Disabilities
- ☐ Other - Please specify:_____
- ☐ Medicine-Pediatric Pulmonology
- ☐ Medicine: General
- ☐ Medicine: Pediatric
- ☐ Mental and Behavioral Health
- ☐ Nursing
- ☐ Nursing-Family/Pediatric Nurse Practitioner
- ☐ Nursing-Midwife
- ☐ Nursing-Other
- ☐ Nutrition
- ☐ Occupational Therapy
- ☐ Pastoral
- ☐ Pharmacy
- ☐ Physical Therapy
- ☐ Psychiatry
- ☐ Psychology
- ☐ Public Administration
- ☐ Public Health
- ☐ Rehabilitation
- ☐ Respiratory Therapy
- ☐ Social Work
- ☐ Speech-Language Pathology

Appendix E

Informed Consent Form- Graduate Student Participants

Evaluating Graduate Student Writing Protocol #

You are being asked to join a research study. You are being asked to take part in this study because you are a 1st year graduate student in speech-language pathology. You do not have to participate in this research study. The main purpose of research is to create new knowledge for the benefit of future patients and society in general. Research studies may or may not benefit the people who participate.

Research is voluntary, and you may change your mind at any time. There will be no penalty to you if you decide not to participate, or if you start the study and decide to stop early. Either way, you can still get medical care and services at the University of Kansas Medical Center (KUMC). Choosing not to participate in this will have no effect on your status as a student.

This consent form explains what you have to do if you are in the study. It also describes the possible risks and benefits. Please read the form carefully and ask as many questions as you need to, before deciding about this research.

You can ask questions now or anytime during the study. The researchers will tell you if they receive any new information that might cause you to change your mind about participating.

This research study will take place at the University of Kansas Medical Center (KUMC) with Matt Braun as the researcher. About 50 people will be in the study at KUMC.

BACKGROUND

Written documentation is an important part of a clinician's job. We are exploring how 1st year graduate students write upon entering graduate school. Information from this study may provide valuable information that could guide future training in written documentation.

PURPOSE

By doing this study, researchers hope to learn about how graduate student clinicians write upon entering graduate school.

PROCEDURES

If you are eligible and decide to participate in this study, your participation will last approximately 60 minutes. Your participation will involve watching two videos of children playing with their caregiver and writing/documenting your observations of the child's communication and behavior after watching each video. For each video, you will be given specific instructions on what to do.

RISKS

The potential risks of this study are minimal. We will maintain the anonymity of participant data by assigning a unique ID number for each participant. Only the research staff will have access to identifiable participant information.

NEW FINDINGS STATEMENT

You will be told about anything new that might change your decision to be in this study. You may be asked to sign a new consent form if this occurs.

BENEFITS

There are no direct benefits from participation in this study. Researchers hope that the information from this research study may be useful in training future graduate students in written documentation.

ALTERNATIVES

Participation in this study is voluntary. Deciding not to participate will have no effect on the care, services or education you receive at the University of Kansas Medical Center.

COSTS

There is no cost for being in the study.

PAYMENT TO SUBJECTS

There is no payment for this study.

This study includes providing writing samples to the researcher. The samples will belong to the University of Kansas Medical Center.

INSTITUTIONAL DISCLAIMER STATEMENT

If you think you have been harmed as a result of participating in research at the University of Kansas Medical Center (KUMC), you should contact the Director, Human Research Protection Program, Mail Stop #1032, University of Kansas Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160. Under certain conditions, Kansas state law or the Kansas Tort Claims Act may allow for payment to persons who are injured in research at KUMC.

CONFIDENTIALITY

The researchers will protect your information, as required by law. Absolute confidentiality cannot be guaranteed because persons outside the study team may need to look at your study records. The researchers may publish the results of the study. If they do, they will only discuss group results. Your name will not be used in any publication or presentation about the study.

QUESTIONS

Before you sign this form, Matt Braun or other members of the study team should answer all your questions. You can talk to the researchers if you have any more questions, suggestions, concerns or complaints after signing this form. If you have any questions about your rights as a research subject, or if you want to talk with someone who is not involved in the study, you may call the Human Subjects Committee at (913) 588-1240. You may also write the Human Subjects Committee at Mail Stop #1032, University of Kansas Medical Center, 3901 Rainbow Blvd.,

Kansas City, KS 66160.

SUBJECT RIGHTS AND WITHDRAWAL FROM THE STUDY

You may stop being in the study at any time. Your decision to stop will not prevent you from getting treatment or services at KUMC, nor will it affect your status as a student. The entire study may be discontinued for any reason without your consent by the investigator conducting the study.

CONSENT

Matt Braun, MA or the research team has given you information about this research study. They have explained what will be done and how long it will take. They explained any inconvenience, discomfort or risks that may be experienced during this study.

By signing this form, you say that you freely and voluntarily consent to participate in this research study. You have read the information and had your questions answered.

You will be given a signed copy of the consent form to keep for your records.

Print Participant's Name

Signature of Participant

Time

Date

Print Name of Person Obtaining Consent

Signature of Person Obtaining Consent

Date

Appendix F

Informed Consent Form- Parent and Child Participants

Evaluating Graduate Student Writing Protocol #

Your child is being asked to join a research study. Your child is being asked to take part in this study because your child is between the ages of 3-5 and is considered to be “typically developing”. Neither you nor your child have to participate in this research study. The main purpose of research is to create new knowledge for the benefit of future patients and society in general. Research studies may or may not benefit the people who participate.

Research is voluntary, and you may change your mind at any time about your or your child’s participation. There will be no penalty to you or your child if you decide not to participate, or if your child starts the study and you decide to stop early. Either way, you and your child can still get medical care and services at the University of Kansas Medical Center (KUMC).

This consent form explains what you and your child will have to do if you are in the study. It also describes the possible risks and benefits. Please read the form carefully and ask as many questions as you need to, before deciding about this research.

You can ask questions now or anytime during the study. The researchers will tell you if they receive any new information that might cause you to change your mind about participating.

This research study will take place at the University of Kansas Medical Center (KUMC) with Matt Braun as the researcher. About 8 children will be in the study at KUMC.

BACKGROUND

Written documentation is an important part of a clinician’s job. We are exploring how 1st year graduate students write upon entering graduate school. We will be using videos of young children for graduate students to watch and write up their observations. Information from this study may provide valuable information that could guide future training in written clinical documentation.

PURPOSE

By doing this study, researchers hope to learn about how graduate student clinicians write upon entering graduate school.

PROCEDURES

If your child is eligible and you decide to allow your child to participate in this study, your and your child’s participation will last approximately 20-30 minutes. Participation will involve you playing your child while the research team video records the play interaction between you and your child.

RISKS

The potential risks of this study are minimal. Child participants will be video recorded playing with their caregiver. Videos generated for this study will be facially identifiable and someone viewing could recognize you in the video. Additionally, sometimes, children's behavior can embarrass their caregiver. We will maintain the anonymity of participant data by assigning a unique ID number for each participant. Only the research staff will have access to identifiable participant information. All writing samples about the videos will be de-identified.

NEW FINDINGS STATEMENT

You will be told about anything new that might change your decision to be in this study. You may be asked to sign a new consent form if this occurs.

BENEFITS

There are no direct benefits from participation in this study. Researchers hope that the information from this research study may be useful in training future graduate students in written documentation.

ALTERNATIVES

Participation in this study is voluntary. Deciding not to participate will have no effect on the care, services or education you or your child receives at the University of Kansas Medical Center.

COSTS

There is no cost for being in the study.

PAYMENT TO SUBJECTS

There is no payment for this study.

This study includes providing video samples to the researcher. The samples will belong to the University of Kansas Medical Center. There are no plans for you or your child to profit from new products that are developed from research on your writing samples.

INSTITUTIONAL DISCLAIMER STATEMENT

If you think you or your child has been harmed as a result of participating in research at the University of Kansas Medical Center (KUMC), you should contact the Director, Human Research Protection Program, Mail Stop #1032, University of Kansas Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160. Under certain conditions, Kansas state law or the Kansas Tort Claims Act may allow for payment to persons who are injured in research at KUMC.

CONFIDENTIALITY

The researchers will protect your and your child's information, as required by law. Absolute confidentiality cannot be guaranteed because persons outside the study team may need to look at your child's study records. The researchers may publish the results of the study. If they do, they will only discuss group results. Neither your nor your child's name will be used in any publication or presentation about the study.

Video recordings generated for this study will be labeled using a unique numeric ID and stored for fifteen years (per university policy) electronically on a secure KUMC network drive. After fifteen years, videos will be destroyed.

QUESTIONS

Before you sign this form, Matt Braun or other members of the study team should answer all your questions. You can talk to the researchers if you have any more questions, suggestions, concerns or complaints after signing this form. If you have any questions about your rights as a research subject, or if you want to talk with someone who is not involved in the study, you may call the Human Subjects Committee at (913) 588-1240. You may also write the Human Subjects Committee at Mail Stop #1032, University of Kansas Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160.

SUBJECT RIGHTS AND WITHDRAWAL FROM THE STUDY

You may stop being in the study at any time. Your decision to stop will not prevent you or your child from getting treatment or services at KUMC. The entire study may be discontinued for any reason without your consent by the investigator conducting the study.

CONSENT

Matt Braun, MA or the research team has given you information about this research study. They have explained what will be done and how long it will take. They explained any inconvenience, discomfort or risks that may be experienced during this study.

By signing this form, you say that you freely and voluntarily consent for you and your child to participate in this research study. You have read the information and had your questions answered.

You will be given a signed copy of the consent form to keep for your records.

Print Participant's Name

Signature of Participant

Time

Date

Print Name of Person Obtaining Consent

Signature of Person Obtaining Consent

Date

Appendix G

Data/Statistical Analyses by Research Question

Research Question 1: Do graduate students write from a strengths perspective? That is, when writing up observations of a child's communication and behavior, do students write using language that is written from an ability perspective with minimal interpretation?

Chi-Square Analysis

Total Sample Frequency Data and Chi Square Analysis

	Expected (%)	Actual (%)	Deviation
D	130 (18.75)	199 (29)	36.62
IN	130 (18.75)	121 (17)	.62
I+	260 (37.5)	245 (35)	.87
I-	173 (25)	128 (18)	11.71
Total	693 (100)	693 (99)	49.82*

$$\chi^2(3, N = 693) = 49.82, p < .001$$

**Indicates significant effects, $p < .001$*

Binomial Pairwise Comparisons

Pair	p
D/I+	.033
D/I-	<.001*
D/IN	<.001*
I+/I-	<.001*
I+/IN	<.001*
I-/IN	.704

**Indicates significant difference at $p < .008$ (Bonferroni Correction = .05/6 tests = .008)*

Research Question 2: Does believing there may be concerns about a child's development influence whether students write more from a deficit perspective when documenting communication and behavioral observations?

Multivariate Analysis of Variance (MANOVA)

Descriptive Statistics

Group	Condition	Mean	Std. Deviation	N
Deficit	Condition 1	1.52	1.94	29
	Condition 2	2.83	3.15	29
	Total	2.17	2.68	58
Strengths	Condition 1	11.28	5.13	29
	Condition 2	8.17	4.03	29
	Total	9.72	4.83	58

Multivariate Tests^a

	Effect	Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter
Cond.	Pillai's Trace	.132	4.179 ^b	2.000	55.000	.020	8.358
	Wilks' Lambda	.868	4.179 ^b	2.000	55.000	.020	8.358
	Hotelling's Trace	.152	4.179 ^b	2.000	55.000	.020	8.358
	Roy's Largest Root	.152	4.179 ^b	2.000	55.000	.020	8.358

a. Design: Intercept + Condition

b. Exact statistic

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Observed Power ^c
Corrected Model	Deficit	24.90 ^a	1	24.90	3.64	.062	.466
	Strengths	139.66 ^b	1	139.66	6.56	.013	.711

a. R Squared = .061 (Adjusted R Squared = .044)

b. R Squared = .105 (Adjusted R Squared = .089)

c. Computed using alpha = .05

Independent Samples t-Test

Group Statistics

	Condition	N	Mean	Std. Deviation	Std. Error Mean
totalinsample	Condition 1	29	12.79	4.75	.881
	Condition 2	29	11.00	4.85	.900

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig.	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference	
									Lower	Upper
totalinsample	Equal variances assumed	.011	.916	1.42	56	.160	1.79	1.26	-.731	4.32
	Equal variances not assumed			1.42	55.98	.160	1.79	1.26	-.731	4.32

Chi Square Analysis by Condition

Chi Square Analysis Condition A (General Prompt)

	Expected (%)	Actual (%)	Deviation
D	70 (18.75)	115 (29)	29.03
IN	70 (18.75)	71 (17)	.02
I+	140 (37.5)	141 (35)	.01
I-	93(25)	46 (18)	23.94
Total	373	373	53.001*

$$\chi^2(3, N = 373) = 53.00, p < .001$$

**Indicates significant effects, $p < .05$*

Chi Square Analysis Condition B (Clinic Prompt)

	Expected (%)	Actual (%)	Deviation
D	70 (18.75)	84 (26)	9.60
IN	70 (18.75)	50 (16)	1.67
I+	140 (37.5)	104 (33)	2.13
I-	93(25)	82 (26)	.05
Total	320	320	13.45*

$$\chi^2(3, N = 320) = 13.45, p = .004$$

**Indicates significant effects, $p < .05$*

Binomial Pairwise Comparisons of Each Code Across Conditions

Code	<i>p</i>
D	.033
IN	.069
I+	.021
I-	.002*

*Indicates significant difference at $p < .013$ (Bonferroni Correction = $.05/4$ tests = $.013$)

Appendix H
Comprehensive Literature Review I

Strengths Based Practices: Barriers to Implementation and Action Steps for Moving Forward

Matthew J. Braun, MA

Comprehensive Examination 1

Abstract

Traditional therapeutic practice models emphasize resolving a person's deficits or problem situations for remediation. In contrast, more contemporary strengths based practice models emphasize harnessing a person's strengths, abilities and existing resources to address life situations and meet self-determined outcomes. This paper compares traditional deficit-based models to strengths-based models and summarizes the interdisciplinary evidence that illustrates the effectiveness of strengths based approaches. Additionally, this paper identifies challenges to the adoption and use of strengths-based approaches and provides action steps to professionals for implementation of strengths-based practices.

Introduction

Ari Ne’eman, a self-advocate and individual with autism writes, “Sadly, the traditional autism community has been driven by a set of priorities different from our own. Led almost exclusively by those not on the autism spectrum, it [the traditional autism community] has made harmful decisions without our input” (2010). Mr. Ne’eman calls on health care providers to make changes in the way they approach their work with families with autism and other disabilities.

There is some tension among providers about how to provide care. For years, medical providers and therapists have delivered health care using traditional service models, which focus on resolving deficits identified during direct assessment of the client (Bransford, 2011; Early & GlenMaye, 2000; Weick, Rapp, Sullivan, & Kisthardt, 1989). Traditional approaches operate using a “provider as expert” framework and place a heavy emphasis on a person’s deficits (Bransford, 2011). Such models may be appropriate in medical fields where disease and illness require an emphasis on those very “problems.” However, in the more socially based fields of therapeutic rehabilitation and habilitation, researchers have found that placing emphasis on strengths and resources has greater positive impact on family outcomes (Dunst & Trivette, 2009; Dunst, Trivette, & Hamby, 2007; Early & GlenMaye, 2000; Saleebey, 2009; Weick et al., 1989). Current practice guidelines from a number of discipline organizations are beginning to emphasize more contemporary approaches highlighting the importance of providing families a way to actively participate in their own care; professionals call this ‘family-centered care’ (American Occupational Therapy Association, 2010; American Speech-Language Hearing Association, 2008; National Center for Family Centered Care, 1989). Mr. Ne’eman claims providers do not provide family centered services. Instead, he contends that providers identify family strengths and resources and claim to be providing family centered care. In contrast, family

centered care involves actually working towards family outcomes by accentuating family's strengths and resources to support progress towards these outcomes. Strengths based models operate by giving consideration to the family's survival skills, abilities, knowledge, resources and desires. Applying a strengths perspective to practice involves applying and building upon identified family strengths to improve a family's current situation (Committee on Hospital Care & Institute for Patient and Family-Centered Care, 2012; Early & GlenMaye, 2000).

The purpose of this paper is to highlight the advantages of strengths based approaches in family centered care and offer providers some action steps that may lead to the adoption of strengths based practices. This will be done in five parts. First, we will discuss the core concepts of traditional deficit based models as well as more contemporary strengths based practice models. Next we will discuss the major differences between the two models. We will then make an argument for using strengths based practices, followed by a discussion of existing barriers to implementing strengths based practices. Finally, we conclude by describing several action items to promote the adoption of strengths based practices.

Core Concepts of Traditional Deficit Based Models

So that we may understand how models of practice are defined, we will use the following four elements as a framework for our discussion:

- The underlying assumptions of each practice model
- The role of providers and families in therapeutic relationships
- The role of intervention
- Attainment of outcomes

Underlying Assumptions of Deficit-Based Models

Deficit models are based on a number of underlying assumptions about the human race and how to provide help to humans in need (Blundo, 2009). Saleebey (2009), Blundo (2009) and Weick et al. (1989) have discussed these basic underlying assumptions at length. We will discuss the major assumptions that provide the foundation for deficit based models. The primary assumption is that “the person is the problem or the pathology named” (Saleebey, 2009, p. 3) and therefore, a person becomes defined by their disorder or deficit (e.g. alcoholics, an autistic person, a schizophrenic or special needs child). Speaking in this way suggests that the problem lies within the person and implies that something is wrong and is something to fix (Saleebey, 2009).

Another assumption relates to the “the language of pessimism and doubt; the sway of professional cynicism” (Saleebey, 2009, p. 4). Providers, consistent with their training, often point out problems and develop treatment plans to fix such problems. Weick et al. (1989) suggest that a “problem is invariably seen as a lack or inability in the person affected” (p. 352). The use of this kind of pessimistic language is often a part of the way providers describe family situations. For example, “Jack’s inability to use words prevents him from having friends”; “Ellie’s difficulty sitting still distracts other children in the class and negatively impacts her own ability to complete her work” or “Luke’s parents are frustrated by his constant hitting when he cannot communicate.”

The next assumption refers to how “distance, power inequality, control, and manipulation mark the relationship between helper and helped” (Saleebey, 2009, p. 5). Under this assumption the balance of power between the provider and families leans to the side of the provider. When focusing on problems, the provider has the defacto “expert” role, and therefore has the power to diagnose or identify the problem and in turn identify the strategies to “fix” these problem(s)

(Saleebey, 2009). In naming the disease, disorder or problem, the provider holds power and control. The unknown becomes known and the families feel a sense of relief in that there are answers to the questions of what is wrong (Weick et al., 1989). Additionally, knowing what to do about the problem or how to overcome challenges enhances the provider's power and creates a greater power differential between the provider and family (Weick et al.).

The final assumption for our discussion deals with “context stripping” (Saleebey, 2009, p. 5). Deficit based assessments focus on problems within an individual and often do not consider the environment or the social context. Such assessments isolate problems to an individual suggesting that the problem lies within the individual rather than within the context or surrounding environments. Giving little consideration to contexts (particularly social contexts) emphasizes the individual as the reason for the problem rather than other salient factors, such as their environment (Saleebey, 2009; Weick et al., 1989). To illustrate this assumption, consider the child referred for a communication evaluation because he is not yet talking at two years of age. A provider may jump to the conclusion that the child has significant language impairment. However, the provider may have failed to consider the child's three older siblings who do all the talking in the house. In another example, an independent child may be able to get his wants and needs met without having to use his language to communicate in certain contexts. In deficit based models, such contextual factors are often not considered.

The Role of Providers and Families

In deficit based models, relationships between the provider and the family are one way and therefore each have clear roles. From the provider standpoint, the individual is seen as needing help or having a problem that needs to be solved. Providers may see individuals from the perspective of what has gone wrong, what is broken or what has failed (Blundo, 2009). From

the family standpoint, the provider is seen as the expert. Sometimes, the provider is sought out to help fix problems. Other times, the provider seeks out the individual in order to help them overcome their apparent problem(s). The role of the provider is to be the expert consultant and the “nature of the problem is defined by the professional” (Weick et al., 1989, p. 352). In deficit based models, individuals and families are rarely encouraged to claim stake in their care and place great trust in their providers to make the best decisions about their care. The provider’s role is to first identify problems based on the challenges or deficits of the individual and then develop strategies and treatment plans designed to overcome or fix those deficits (Saleebey, 2009; Weick et al., 1989).

The Role of Intervention

Working under the major assumptions of the deficit model, the process of “helping” families has two major components: to identify the problem through assessment/diagnosis and develop outcomes and an intervention plan to work towards achieving those outcomes. In deficit based models, “treatment is directed toward overcoming the deficiency at the heart of the problem” (Weick et al., 1989, p. 352) with the ultimate goal of achieving outcomes that are the “fix” or the “solution” to the identified problem (e.g. diagnosis).

The process of assessment and diagnosis inherently focuses on a problem or deficit area. Diagnoses are based on criteria which outline the deficit behaviors that are descriptive of a specific label or categorization. A hallmark example of this is the use of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition- Text Revision* (DSM-IV, TR) to identify a specific condition for which an individual meets criteria. The DSM-IV-TR outlines mental disorders based on various deficit behaviors observed in individuals (American Psychiatric Association, 2000). When an individual displays a specific cluster of deficit behaviors or

characteristics, those behaviors are matched to a specific diagnostic category and/or subcategory. Once the provider has identified the problem (e.g. made a diagnosis), they are often asked to apply their expertise to develop an intervention plan. In deficit models, the provider gathers information about the individual and their family that might be contributing factors to the individual's problem (Bransford, 2011).

Attainment of Outcomes

In deficit based models, outcomes of treatment are based on the expertise of the provider and emphasize fixing the problem. Outcomes focus on changing the individual to approximate normalcy, work towards standards or diminish abnormalities. Therefore, outcomes are met when the individual has maximized their potential to approach normalcy (in habilitative programs) or regained/restored normalcy (rehabilitative programs). When families have met the objective set forth by the provider, only then have they completed their therapy.

Conclusion

As can be seen, deficit based models of practice operate on several underlying assumptions. These assumptions suggest that problems or deficits lie within the person. The role of the provider is to identify a problem and subsequently develop an intervention plan. The purpose of the intervention plan is to ultimately fix the problems and create a situation of normalcy. Outcomes are based on the providers' expertise. As we will see in the next section, strengths models operate on different assumptions and outcomes.

Core Concepts of Strengths Based Models

Using the same framework as above, we will now explore the key elements that provide the framework for strengths based models of practice.

Underlying assumptions of strengths based models

Saleebey (2009) describes six underlying assumptions of strengths based practice models, though our discussion will focus on the five most prominent assumptions. The first is that “every individual, group, family, and community has strengths” (Saleebey, 2009, p. 15). Included in these strengths is the capacity to grow, change and adapt (Early & GlenMaye, 2000). Under this assumption, providers must assume that regardless of their perceptions, individuals and their families have strengths and resources.

Next, deficits and problem situations “may be injurious, but they may also be sources of challenge and opportunity” (Saleebey, 2009, p. 16). In strengths based models providers and families identify ways in which situations and events can challenge families to identify resources they did not know existed. Rather than pity the families for what they are experiencing, providers work to support families in identifying and locating such resources (Saleebey, 2009).

Further, providers and families assume they “do not know the upper limits of the capacity to grow and change” (Saleebey, 2009, p. 16) and that “every environment is full of resources” (Saleebey, 2009, p. 18). Families are much more resilient (particularly in the face of adversity) than they are often given credit. (Early & GlenMaye, 2000; Saleebey, 2009). Working with families to identify strengths and needs is much different from assuming what those strengths and needs are. When partnering with families, professionals realize families’ true potential which often surpasses their own as well as the families’ ideas about their capacity to grow and thrive. Strengths or positive attributes can be found in every situation. It may take additional time to find strengths and positive attributes, but they are present in every environment. In situations where it is challenging to identify positive attributes or find resources, providers must suspend disbelief. Being aware of one’s own biases and assumptions about families can lead to more fruitful efforts in identifying strengths and resources.

The final assumption highlights that providers “best serve clients by collaborating with them” (Saleebey, 2009, p. 17). The foundation of the collaborative partnership between providers and families is the open dialogue that occurs. In strengths based models, providers consider the families and clients as experts (rather than themselves) and work as a resource to support the families to identify their own strengths and resources (Saleebey, 2009).

The Role of the Providers and Families

In strengths based models, the individuals and their families are the primary decision makers to determine what aspects are most important to them to target in interventions. In such models, providers and families form partnerships, working together to develop goals, identify outcomes and generate plans for working toward those outcomes. In the evaluation process, families and providers together identify areas of strength, as well as goals for using those strengths to support areas of need (Allen & Petr, 1996). Providers are considered a guide or an agent to the family and their role is to assist them in identifying their own strengths and resources and help them realize their potential. In doing so, families and providers form partnerships in program planning (Bransford, 2011; Dunst & Trivette, 1996; Feeley & Gottlieb, 2000; Saleebey, 1996).

The Role of Intervention

In strengths based models, the role of intervention is to help families identify their own strengths, create goals and locate resources that can assist them in achieving their desired outcomes (Weick, Kreider, & Chamberlain, 2009; Weick et al., 1989). Outcomes are generated together based on the families’ desires. The course of action and plan for intervention is driven by the individual and family based on identified outcomes (Saleebey, 2009; Weick et al., 1989).

Together, the provider-family team determines appropriate outcomes, the resources necessary to achieve those outcomes and how to determine when those outcomes have been met

Attainment of Outcomes

Intervention outcomes are met when families decide they have either sufficiently met the goals they set or they have identified sufficient resources to proceed independently without the assistance of the provider. Attainment of goals does not necessarily mean that the provider family relationship must be severed. However, in strengths based models, the level of direct involvement of the provider is variable. The provider role is more of a coach or mentor and therefore, the process of goal attainment may actually include a continued relationship with a provider as more of a consultant rather than a direct service provider.

Conclusion

Strengths models are based on underlying assumptions suggesting that all families have strengths and resources and the focus of therapeutic relationships should be on the family's desires and potential as well as on positive attributes. In strengths based models the role of the providers and families is that of a partnership and the purpose of intervention is to realize family dreams and potential and work towards the family's identified goals. Outcomes are met when families and providers feel they have met their goals or when families have identified sufficient resources to proceed independently. In the next section we will discuss the major differences between deficit based models and strengths based models.

Comparison of Deficit Based and Strengths Based Practice Models

Although the primary focus of both strengths and deficit based models is on improving quality of life for families, there are significant differences between the two approaches. One common misconception is that strengths based models ignore problem situations. Strengths

models work to improve situations by focusing on resources rather than dwelling on problems. Early and GlenMaye (2000) suggest that providers in deficit based models spend more time identifying a problem, seeking its cause and generating a name for that problem than actually resolving the ‘problem’. In strengths based models, the focus is on identifying strengths and resources that positively impact the “problem situation.” Focusing on problems (and their causes) hinders one’s ability to emphasize strengths and positive attributes. Identifying strengths and positive attributes is not where strengths approaches end. In order to use a strengths based model, providers must go beyond simply reframing problems and finding strengths. Providers must support families to identify resources that support the use and application of their identified strengths when challenges arise in the family. With an understanding of deficit and strengths based models, this section will discuss in greater depth the differences between the practice models. For consistency, we will continue to use the same four core elements for comparison, while also providing some examples that illustrate these differences between the models.

One major difference in the models is in the underlying assumptions, which directly affects the starting point of service provision. Deficit approaches look at the family on the basis of a problem and where they fall on some continuum of normalcy. Families are often defined by their “problem” or “deficit.” The “expert” provider holds the knowledge and skills necessary to identify and fix a given problem. For example, families often attend services that are named for the deficit or problem situation (e.g. the Autism Center or the Cerebral Palsy Clinic).

Using deficit based approaches promotes an imbalance in the provider-family relationship giving providers substantially more power and expecting families to take a more passive role in therapeutic activities. This power differential creates distance with regard to class, information sharing and institutionalization of roles. Focusing on problems also leads to de-

contextualization of a said “problem.” This allows providers to categorize clients without regard for the surrounding contexts and possible attributes that may actually be identifiable strengths. (Saleebey, 2009). For example, diagnostic teams use assessment protocols in clinic settings that are not natural or familiar to a child or their family. Further, they use standardized assessment protocols to gather information pertaining to a specific deficit. In contrast, strengths approaches look at the family on the basis of their current status and where they want to go/what they want to do. Strengths approaches also consider situations within the family context. For example, strengths based services often occur within environments natural to the child (e.g. homes, parks, child care locations, restaurants). Such services give greater meaning to therapeutic activities by providing real life practical experiences.

A provider using a strengths-based approach acts more like a coach, a guide or a consultant to the family. The relationship between the provider and family is a partnership that works towards a shared vision because they work together to generate goals, and design the activities and resources necessary to achieve those goals. The role of the provider in strengths based models is to guide the families in identifying new and existing resources and assets that support their life activities. In strengths based models, families direct therapeutic activities and play a more active role in the therapeutic process.

The purposes of intervention and outcome attainment are two additional points of difference between the two practice models. In deficit models, the emphasis of intervention is on normalization or remediation of an individual. Goals are based on the provider’s ideas of what needs to be fixed. Therefore, the provider often identifies outcomes with little to no family input. One example of this is the school team coming to an Individualized Education Plan (IEP) meeting with pre-written goals based on a child’s deficits having not sought family input. In

contrast, strengths based models start with the family rather than the problem. The purpose of intervention is to achieve the family's desires and potential rather than focus on fixing a problem. Further, the provider-family team also works together to identify avenues that may be used to access new and untapped resources. The structure of Individualized Family Service Plan (IFSP) documents is one example of a strengths based approach. Goals are based on the family's desires for what they would like for their family and their child.

In deficit models, outcomes are met when the individual has achieved their highest point of normalcy within their given potential. Providers generally determine when outcomes have been met or the client has met maximal potential. Conversely, in strengths based models, outcomes are met when the provider-family team decides [together] the outcomes have been met. This can be illustrated by families who participate in day to day activities that are meaningful and satisfying to them without the support of a provider. In strengths approaches, families reach a point at which they understand how to solve new challenges with their own resources. They no longer see the provider as the source for solutions. Rather, families begin to understand their own problem solving structure to find ways of ensuring meaningful participation by all family members. Consider the family who decreases the amount of direct speech therapy for their toddler who has not met all of the developmental milestones they set out to accomplish at the onset of therapy, but who can make needs, desires and preferences known within the family unit. In this case, the speech therapist has helped the family acquire the tools necessary to continue to foster speech acquisition without ongoing professional guidance. Appendix 1 uses a case example to more fully illustrate the collective differences between the two practice models.

Conclusion

As we have illustrated, significant differences exist between the primary elements of deficit based practice models and strengths based practice models. These major differences can be found in the underlying assumptions of the two practice models, the roles that providers and families play in each practice model, the role of intervention and how to determine when outcomes have been met. Now that we have identified and compared the core concepts of the two types of practice models, we will advocate that strengths based practices are more effective models for serving families.

Evidence for Strengths Based Practices

Strengths based practices originated from the family centered care movement (Saleebey, 2009), which can be traced back to the 1950's (Weick et al., 1989). However, it was not until 1979 that the Surgeon General's first Healthy People report (United States. Public Health Service. Office of the Surgeon General & United States. Public Health Service. Office of the Assistant Secretary for Health, 1979) formally introduced the idea of "family centered care." Over the next 30 years, the concept of family centered care has evolved. Subsequent initiatives (Healthy People 1990, 2000, 2010 and 2020) and various national organizations would contribute to an evolving definition of family centered care. While there is not one agreed-upon definition of true family centered care, there appears to be a consensus on the major components of family centered care. These include respect for all team members (including families as team members), a focus on family strengths and resources, cultural competence and a balanced relationship between providers and families (American Occupational Therapy Association, 2010; American Speech-Language Hearing Association, 2008; Committee on Hospital Care & Institute for Patient and Family-Centered Care, 2003, 2012; National Center for Family Centered Care, 1989). These core elements of family centered care have become the foundation for strengths

based practices and have given rise to several fields of study, including the strengths perspective, positive psychology and positive deviance (Saleebey, 2009). To make an argument for the use of strengths based practices, we will explore the current state of evidence for this approach within these three emerging fields.

The Strengths Perspective

The principles and theoretical foundations of the strengths perspective are well documented. However, many providers still consider the strengths perspective to be in its infancy, but an expanding base of evidence exists to support these theories (Lietz, 2009; Saleebey, 2009).

Many researchers have suggested that using strengths based approaches allows providers to learn from families. Dyke, Buttigieg, Blackmore, and Ghose (2006) surveyed families to determine what provider behaviors were most important to them and found that respectfulness and support were the most important qualities supported as strengths based practices. King et al. (2006) described the importance of recognizing family values and world views and how these may change over time. Learning about what is important to families affords providers the opportunity to support families more effectively. Families can also promote strengths based behaviors in providers through parent educator models (Gallagher, Rhodes, & Darling, 2004) which place parents as resources for providers. These models help create a more balanced provider-family relationship.

Research indicates that strengths approaches enhance the perceptions of families' about their child with a disability and improve families' hopes for the future (Carlson, Armitstead, Rodger, & Liddle, 2010; King et al., 2006; Law et al., 2003). In addition to positive child perceptions, strengths based practices improve parents' interactions with and their affect towards

their children. Strengths approaches also positively influence parent well-being and are possible sources of coping (Steiner, 2011).

Strengths based practices have positive effects on challenging behaviors in children with disabilities (Kuo, Bird, & Tilford, 2011). Such practices have also had positive impacts on academics and school attendance in adolescents who were at high risk (Stormshak, Connell, & Dishion, 2009). Kuhlthau et al. (2011) completed a systematic review of studies implementing family centered care practices and associated outcomes. In this review, using family centered practices improved outcomes for children and families with special health care needs. Such outcomes included efficient use of services, health status, communication, family functioning and satisfaction.

Positive Psychology

In the 1990's the field of psychology placed heavy emphasis on the prevention of mental illness. In the late 1990's prevention scholars began to realize that models focusing on deficits do not promote prevention (Seligman & Csikszentmihalyi, 2000). Instead, prevention would ultimately come from building competence rather than fixing problems. Building such competencies increased the focus on human strengths (Seligman & Csikszentmihalyi, 2000). Seligman (2002) subjectively describes the positive psychology experience to include "well-being and satisfaction (past); flow, joy, the sensual pleasures, and happiness (present); and constructive cognitions about the future—optimism, hope, and faith (p. 3)."

Like the strengths perspective and other strengths based approaches, positive psychology places emphasis on balanced family-provider relationships that value mutual respect and support (Palisano et al., 2011). Wood, Linley, Maltby, Kashdan, and Hurling (2011) found improvements in self-esteem, vitality, positive affect and lower perceived stress in individuals who reported

increased use of their own strengths. These findings support the use of strengths in therapeutic interventions to improve individual well-being.

In 2005, Duckworth, Steen, and Seligman (2005) lobbied for the use of positive interventions by summarizing existing evidence. In their review, Duckworth et al. (2005) suggest that scholars have described more than 100 positive interventions over time. The most rigorous studies (and several follow up studies) demonstrated improved happiness and mood, decreased anxiety, better physical health and more optimism. All findings support the use of positive psychological interventions in practice.

More recently, Sin and Lyubomirsky (2009) completed a meta-analysis investigating the effectiveness of positive psychology interventions to improve well-being and reduce depressive symptoms. Their findings indicated that positive interventions do in fact promote positive feelings, behaviors and thoughts. They also found that depression status, self-selection, participant age and format/duration of interventions were all contributing factors to positive outcomes. Sin and Lyubomirsky encouraged providers to incorporate positive psychology interventions.

Positive Deviance

Positive deviance (PD) is another approach that employs a focus on strengths and resources as the foundation for intervention. First described over 20 years ago, the PD process “helps members of the community uncover the positive deviants in their midst and identify their successful practices and then, through widespread engagement, amplify and spread these practices” (Lindberg & Clancy, 2010, p. 152).

Health professions first used PD to improve nutrition in young children from poor and developing communities (Walker, Sterling, Hoke, & Dearden, 2007). Using PD approaches,

researchers designed parent education programs focusing on nutrition and found sustained improvements in children's as well as their siblings nutrition over time (Mackintosh, Marsh, & Schroeder, 2002). PD has also improved the quality of health care related to survival rates (in medical institutions), medication compliance, timely emergency treatment, pregnancy outcomes and condom use (Bradley et al., 2009).

In addition to using PD approaches directly with patients and families, PD is an effective method for diffusing new practices in health care organizations. One example is that PD improves hand hygiene compliance in health care settings significantly reducing the spread of infectious disease (Marra et al., 2010; Singhal, 2010). Clancy (2010) suggests that identifying the positive deviants within organizations is key to solving complex problems and improving processes. Positive deviants tend to promote greater staff involvement in such processes and are willing to go off the beaten path when creating solutions to problems.

Conclusion

As we have shown, several fields of study (e.g. the strengths perspective, positive psychology, and positive deviance) have successfully employed the use of strengths as a foundation for serving families and improving outcomes. Various discipline organizations have adopted strengths based practices as their standard of care. However, despite the existing evidence for strengths based practices, providers continue to use deficit based models when working with families. As such, we will now explore the barriers that have hindered the adoption and implementation of strengths based practices.

Barriers to Implementing Strengths Based Practices

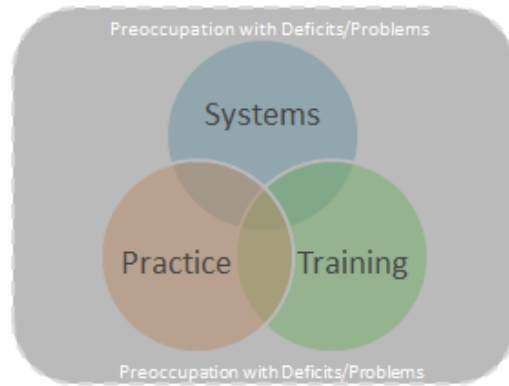
With a foundation of evidence for strengths based practices, next we will discuss existing barriers to the adoption of strengths based models as more effective practices than traditional

approaches. Practice models generally begin as useful methods to solve a problem, and then can persist even when evidence suggests a new approach may be appropriate. The slow adoption of strengths based practice models is an example of the lag time between available evidence and adoption of practices. A primary barrier to implementing strengths based practices (likely) lies in a persistence of deficit based thinking within service delivery systems (Saleebey, 2009, p. 26).

This focus on problems and deficits is not limited to providers. Over time, providers operating from deficit based perspectives have influenced families' understanding of service models resulting in the persistent deficit based thinking among families in addition to providers. Families often enter therapeutic relationships with a deficit based perspective, enlisting the expertise of a specialist to help them solve their "problem." Additionally, some families view this relationship and intervention time as a respite and an opportunity to take a break while their child participates in therapy.

The persistence of deficit based thinking occurs in all levels of service delivery. To illustrate this, we will discuss deficit based thinking in three major components of service delivery. These components are: Qualification Systems/ Reimbursement, Pre- and Post- Service Training and Practice.

With an understanding of how such systems work, we can begin to understand how external forces might affect the system as a whole, as well as within each component. It is our belief that the persistence of deficit based thinking previously discussed works as a primary underlying force that impacts each of the components of the system. As such, the diagram below represents how deficit based thinking can impact service delivery systems.



We will first discuss how deficit based thinking persists in qualification and reimbursement systems.

Reimbursement Systems Require Deficit Based Qualification

Traditional service systems have been built on deficit based thinking. Access to publicly funded services as well as receipt of insurance benefits is generally dependent on a label or classification. Such classification systems are useful in that they provide a clear cut definition of what constitutes eligibility for services. However these classification systems have led to stereotyping and in some ways discrimination.

The International Classification of Diseases- Tenth Revision (ICD-10; World Health Organization [WHO], 2010) is a primary example of how deficit based thinking is at the core of such systems. Used to “classify diseases and other health problems”, the ICD-10 outlines diseases and health conditions based on their core deficit features. Third party payers require providers to use ICD codes in order to receive reimbursement. The DSM-IV-TR (American Psychiatric Association, 2000) is another hallmark example of this type of barrier to strengths based practices. In the DSM-IV-TR, diagnostic codes are based on the presence of various deficit behaviors or symptoms and do not consider strengths.

In addition to diagnostic coding from the DSM-IV-TR and the ICD, providers must also use procedural codes based on the type of assessment, equipment used and time spent with the

patient. These Current Procedural Terminology (CPT) codes are often time based, specific to a given condition and require face to face interactions (American Medical Association, 2012). For example, a speech-language pathologist completing a speech and language evaluation would use CPT 92506. However, for a speech and language evaluation for prescription of a voice output device, CPT 92607 would be used (American Medical Association, 2012; American Speech-Language Hearing Association, 2012). Reimbursement may be different each CPT code and may also vary based on the diagnostic ICD code used. The requirement of face to face interactions also limits the ability to implement coaching practices with families. Such models are useful in more physiologically based medical conditions. In the social and behavioral sciences, however, strengths based practices are the more effective method for improved family outcomes. Even with this evidence, reimbursement and service systems continue to rely on deficit based diagnostic coding systems as a means for families to access services. However, attempts have been made to move the field to more strengths based approaches.

Systems level legislation like the Americans with Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA) have brought to the forefront the issue of equality in services and access to resources for all Americans (The Americans with Disabilities Act of 1990, 1990; Individuals with Disabilities Education Act, 2004). Mandates driven by the ADA and IDEA were hallmark events in the promotion of civil rights. However, in many ways, these mandates were based on deficits and emphasized individuals' differences and particular characteristics that make individuals different. In doing so, unintended discrimination and singling out occurred creating a reverse effect of its original intent. One intention of the ADA was to eliminate segregation of individuals with disabilities as the ADA suggests designated areas to be used only by individuals with disabilities is illegal. Perry (2003) argues that many

portions of the ADA actually contradict itself by promoting such segregation. This is illustrated by the ADA's charges to change and adapt existing spaces to accommodate individuals with disabilities. We see another example of this contradiction in the ADA mandates surrounding "handicapped" parking spaces. The number of accessible parking spaces is based on the total of number of spaces in the lot and only individuals with a documented disabling condition are eligible to park in those spots ("The Americans with Disabilities Act of 1990," 1990; Perry, 2003; U.S Access Board, 2004). Persistent deficit based thinking is also illustrated by the wording within these documents. Terminology often emphasizes the disabling features of conditions rather than how unique characteristics may be strengths and promote individuality. This is illustrated in the continued use of the word "disability" in the title of statutes like the *Individuals with Disabilities Education Act* and the *Americans with Disabilities Act*. We also see this terminology within the documents themselves. For example, the IDEA uses the term "children with a disability" multiple times throughout. It provides a specific definition of "child with a disability" emphasizing individuals' specific disabling characteristics ("Individuals with Disabilities Education Act," 2004).

Practice is Organized Around Deficit Based Thinking

Many providers claim to use strengths based approaches to family centered care, when in fact, they continue to operate under deficit based models by focusing on the family's problems and diagnoses (Dunst & Trivette, 1996). Saleebey (1996) found that many providers frequently incorporate family strengths in their assessments and practices, but fail to fully accept and implement strengths based practices. To this end, it takes more than simply identifying strengths; it takes a change in the way providers think about families. Providers' assumptions and biases often guide their professional interactions with families. Therefore implementation of

a strengths based approach must start with a paradigm shift. Blundo (2001) suggests that we as providers must “overcome our natural biases to help and our trained biases such as professional knowledge/expertise and professional practice patterns” (p. 297). Operating from a “professional as expert” framework assumes the presence of a problem and can foster therapeutic relationships built on providers’ ideas rather than on the families’ (Blundo, 2009).

Additional barriers exist in the way providers listen to families as they tell their stories. Providers are often trained to listen for themes of symptoms, problems or pathologies. Such “problems” are often the most provocative pieces of information and more easily capture the attention of providers. Hearing these “problems” confirms providers’ original assumptions that a problem exists (Blundo, 2001).

Training Focuses on Deficit Based Thinking

Upon review of the accreditation standards from several discipline organizations (American Speech Language Hearing Association, American Occupational Therapy Association and the American Dietetics Association), we found several commonalities in how pre-service training programs are expected to structure their programs. Each set of standards roughly indicated that programs should provide training in the following core areas: foundational principles of the discipline, theoretical bases, evaluation, treatment, research, ethics and contextual or cultural perspectives of families (Accreditation Council for Education in Nutrition and Dietetics, 2012; Accreditation Council for Occupational Therapy Education, 2012; American Speech Language Hearing Association Council for Academic Accreditation, 2011). While none of these three documents directly addresses the use of strengths based approaches, they all incorporate elements family centered care. Of the three program types, occupational therapy (OT) best incorporated family strengths by addressing contextual issues. OT standards included

the importance of therapy activities being meaningful to families and occurring in their natural contexts.

Based on the standard of these disciplines', each program type is charged with training students in the assessment and treatment of various aspects of the human condition. In working toward these standards, pre-service program guidelines often require students to complete coursework centered on various disability conditions. For example, students in speech-language pathology graduate programs are required to take courses titled, "Dysarthria/Apraxia," "Reading Disorders," and "Fluency Disorders" among others (University of Kansas Intercampus Program in Communicative Disorders, 2012). Course titles from other disciplines include "Special Problems in Dietetics" (St. Louis University Department of Nutrition and Dietetics, 2011), "Lived Experience of Disability and Chronic Conditions" (St. Louis University Department of Occupational Science and Occupational Therapy, n.d.) and "Complex Patient Management" (University of Kansas Department of Physical Therapy and Rehabilitation Sciences, 2012). Although knowledge and skills in these areas are essential to understanding the nature of such conditions, coursework often focusses on the disabling characteristics of such conditions rather than on individual strengths. In this way, students are taught to focus on the deficit of their patients rather than emphasize the strengths.

In addition to pre-service coursework, community based providers often do not operate using a strengths based approach. Therefore, pre-service clinical experiences with community based providers may not give students adequate opportunity to apply strengths based practices with families. When this happens, students learn to use deficit based practices which may or may not be in conflict with their didactic learning. Such activities continue to promote deficit based thinking in students.

Post service training experiences such as conferences, workshops and continuing education materials also often operate from a deficit based perspective. Many day long workshops focus on specific disability conditions and what providers can do to treat core deficit symptoms. With a focus on the deficit features of a disability, providers are trained to look for those very features often blinding them to family strengths. Other training workshops often advertise basic certification in a specific treatment protocol. Giving providers this type of expertise reinforces the “provider as expert” model promoting continued deficit based thinking. Providers who hold these types of credentials may be considered specialists who can treat specific deficits for a given disability. This type of approach continues to emphasize the symptomatology and the disability condition rather than the family’s strengths.

Conclusion

We believe the primary barrier to implementing strengths based practices lies in a persistence of deficit based thinking. We see evidence of this type of thinking at all levels of service provision including qualification and reimbursement systems, practice and training. We have illustrated how deficit based thinking persists in each of three areas and require change. Therefore, action steps must be taken to promote a shift towards more strengths based thinking at each of the three levels of service delivery.

Action Steps

Promote Strengths Approaches at the Systems Level.

One way to promote true family centered care from a strengths perspective would be to find ways to include individuals with disabilities in the development and implementation of policies that drive systems. Additionally, providers who have training and experience in the field of disabilities can get involved in the development of policies by contacting legislators and

providing evidence of best practices. Providers can also encourage families to engage with their legislators. Having families share their stories is often one of the most powerful ways to grab the attention of policymakers and drive change.

Another way to promote family centered care is for providers to get involved within their own practice settings. In many clinics, medical centers and service agencies, providers are far removed from the billing side of business. Third party payers interface with medical coders, accountants and billers, all of whom often have little interaction with or understanding of the services families receive from their institution. We suggest that by having service providers interface with third party payers, the third party payers may gain a better understanding of the actual services and needs of families.

Promote Strengths Approaches in Practice

In practice, providers must focus on strengths and resources and recognize families as equal members in the provider-family relationship. Dunst and Trivette (1996) suggest that providing services through family centered care allows families to feel empowered and maximizes benefits of services. Therefore, one way providers can promote strengths based practices is to shift their focus from family concerns to family strengths. Letting identified strengths be the center of the plan of care and intervention instead of family deficits can help providers shift their focus from a deficit based approach to a strengths based approach.

To do this, providers must first set aside their own beliefs and biases about families when entering provider-family relationships. Beginning with unassuming, open ended questions (or statements) about the families' existing strengths and resources sets a positive tone for the interaction. Questions/statements might include: "Tell me about Simon." "What does he like to do?" "What is he good at?" From there, the provider can ask questions about the families' hopes,

desires and goals. Together, the family and provider will arrive at what goals are most important to the family while having a bank of strengths and resources to support identified goals. A strengths based provider will help families see the positive attributes of behaviors that may be identified concerns. For example, Simon's parents might identify one of his strengths as helping in the kitchen. They may identify their goals for Simon as reducing his rigidity about how things go and increasing his flexibility. The strengths based provider may see Simon's rigidity as being a good organizer or rule follower. As a result, therapeutic activities might include having Simon develop a week's menu based on everyone's favorites. He could subsequently help with making favorite recipes (following rules and organizing ingredients) or variations of a favorite recipe to promote flexibility. Using identified strengths as a foundation for treatment planning further emphasizes those strengths.

In addition to direct practice activities, providers promote strengths based practices by adjusting the language they use when talking about and writing about families. Strengths based providers are cognizant of families and their individuality. Rather than describing the family of a child with autism, they simply refer to the family as a family. Professionals can change their reports by developing protocols and writing guidelines that emphasize family strengths and resources rather than concerns and deficits. Using positive language in professional reports can promote improved family satisfaction as well as family and provider perceptions of children (Farrell, 2009; Saleebey, 2009).

Promote Strengths Approaches in Training

In pre-service training, much of the coursework and student practical experiences focus on disabling features of various disability conditions. Learning activities may address strengths and resources, but greater emphasis is often placed on the deficit symptoms in various

populations. For example, courses are often named for a specific disability condition (e.g. autism, dysphagia). Such experiences can easily promote deficit based thinking. To promote strengths based practices, we can revisit curriculum structure, rename coursework or rewrite program guidelines using strengths based language.

We can also change the language in post-service training activities. For example, in describing a workshop, rather than “A day long workshop on using visual supports for children with autism,” we might say “A day long workshop on strategies to promote flexibility, communicate clear expectations and teach routines.” In this way, we emphasize desired positive outcomes rather than a target disability population. In this particular example, these types of strategies are generally effective for children of all abilities. Therefore, the emphasis on autism spectrum disorders may be unnecessary all together. Consider another example: “This workshop will describe one interdisciplinary approach to address feeding difficulties in young children with disabilities.” In this description, emphasis is placed on feeding *deficits* as well as the disability status of a given group. Describing this same activity from a strengths perspective, we might say, “This workshop will describe one interdisciplinary approach to promoting nutrition and healthy eating routines in young children.” Again, we have focused on the desired positive outcomes and removed the emphasis on a disability population. In the same way, strategies in this type of workshop will be effective for young children of all abilities.

Conclusion

In this paper, we outlined the core features of deficit and strengths based approaches to highlight the advantages of using more contemporary strengths based practice models over traditional deficit based practice models. Evidence from several up and coming fields using strengths as the foundation for rehabilitative and habilitative intervention illustrate the

effectiveness of strengths based practices. A number of discipline organizations are beginning to emphasize the importance of strengths based practices. We presented barriers to implementing strengths based practices and potential action steps providers could use to adopt strengths based practices. Future work will address effective strategies for promoting adoption of evidence based practices and closing the research to practice gap.

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Appendix

Consider the family of a child with an autism spectrum disorder.	
In Deficit Based Models	In Strengths Based Models
<ul style="list-style-type: none"> The provider enters the provider-family relationship with preconceived ideas of what the family needs. 	<ul style="list-style-type: none"> The provider enters the provider-family relationship with an understanding of autism spectrum disorders and the impact this can have on families.
<ul style="list-style-type: none"> The provider begins by gathering information about parental concerns, the child's challenges and what the child does well. 	<ul style="list-style-type: none"> The providers begins by having the family tell their story, inquiring about child and family strengths and the families' hopes and desires for their child.
<ul style="list-style-type: none"> The provider may or may not complete formal testing to compare the child to other same age. Based on this comparison to the general or typically developing child, the provider develops a treatment plan. 	<ul style="list-style-type: none"> The provider may use formal or informal assessments to gather information about the child's abilities and strengths. Based on findings from the assessments and family input, the provider-family team works to generate goals and targets that can help the family achieve their desired outcomes.
<ul style="list-style-type: none"> Treatment programs may include toys or activities specifically designed to promote development and are chosen by the provider. Treatment activities may take place in a clinic setting, a therapy room at school, in the child's home or in classrooms. 	<ul style="list-style-type: none"> Therapeutic programs will include a variety of activities aimed at creating meaningful experiences for the child and family. Treatment materials will include existing resources to which the family already has access (e.g. toys in the home, the child's favorite cup or plate). Treatment activities will take place in settings that are natural to the child and family. Treatment activities may take place in unfamiliar settings if the promoting flexibility in new situations is one of the families' goals.
<ul style="list-style-type: none"> The provider takes the lead on therapeutic activities and gathers data throughout during treatment activities. 	<ul style="list-style-type: none"> The family takes the lead in therapeutic activities and the provider is more of a coach, a guide or resource to the family.
<ul style="list-style-type: none"> Data is used to track progress toward treatment goals that are based on "normal" development. 	<ul style="list-style-type: none"> Together, the family and the provider monitor progress toward desired outcomes.
<ul style="list-style-type: none"> Once the child has met all of his goals, he is either discharged from therapy or the provider develops new goals based on the next level normal development. 	<ul style="list-style-type: none"> Once the family decides they are comfortable and have the necessary skills to continue to promote the child's development, the provider phases out of the therapeutic relationship.

Appendix I
Comprehensive Literature Review II

Using Coaching to Strengthen Professional Development Activities

Matthew J. Braun, MA

Comprehensive Examination 2

Introduction and Background

Professionals are charged with keeping abreast of current research in their disciplines and moving fields forward by using evidence based practices within their daily work. However, it is a continuous challenge to translate research into everyday practice. This research to practice gap is well documented across a variety of disciplines (Dingfelder & Mandell, 2011; Kretlow & Blatz, 2011; Lord et al., 2005; Smith et al., 2007; Squires, Estabrooks, Gustavsson, & Wallin, 2011; Walker, 2004; Zipoli & Kennedy, 2005) and is a frequent topic of discussion in professional research and practice forums. However, organizational change (such as adopting new practice programs) can be challenging. Managing this type of organizational change requires leaders to “honor the past while creating a compelling vision for the future” (Shermont, Krepcio, & Murphy, 2009, p. 141).

To address this issue, there are lines of research targeting how to best bridge the “research to practice gap.” Professionals use the term “translational research” to describe the process of moving new knowledge and scientific evidence from research contexts to everyday practice. There are two commonly recognized definitions of translational research. The first refers to more laboratory based sciences where new knowledge about a disease informs the development of new therapeutic interventions. The second definition refers to findings from research studies being translated into day to day clinical activities and will be the definition we use in this paper when referring to translational research (Woolf, 2008).

Traditional mechanisms for promoting new practices include published studies and concept papers in scholarly journals or other professional development (PD) activities such as workshops, presentations at conferences, and other lectures most of which occur as one-time meetings (Bruder, Mogro-Wilson, Stayton, & Dietrich, 2009; Dunst & Raab, 2010). With the

evolution of mail order PD, web- based learning, smartphones and open access search engines like Google Scholar, professionals have significantly increased access to abstracts, published evidence and learning material regarding best practice. Even with this increased access to the literature and online learning, professionals often report a lack of time and understanding of how best to locate information (Kretlow & Blatz, 2011). As a result, many professionals do not access and/or read published literature and rely on other methods of PD to learn about new practices (Beach et al., 2007; Kretlow & Blatz, 2011; Williams & Coles, 2007). These methods include the more traditional one time contact activities such as conferences, workshops or lectures. Kretlow, Cooke, and Wood (2011) stressed the importance of high quality staff development in the process of bridging the research to practice gap. While traditional, one-shot PD activities may provide useful information about new practices, the addition of a coaching component (ongoing, job embedded follow up) increases the likelihood that professionals will adopt and implement newly learned practices in a way that demonstrates fidelity (Birman, Desimone, Porter, & Garet, 2000; Bush, 1984; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey & Yoon, 2009; Kretlow & Bartholomew, 2010; Kretlow et al., 2011).

Years of published research would suggest that most traditional forms of professional development (e.g. one time contact) are ineffective with regard to carryover of learned skills to everyday practice (Ball & Cohen, 1999; Birman et al., 2000; Bruder et al., 2009; Bush, 1984; Dunst & Raab, 2010; Garet et al., 2001; Guskey & Yoon, 2009; Kontos, Howes, & Galinsky, 1996; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). As such, the rate at which professionals adopt and implement evidence based practices is slowed. However, research from several disciplines indicates that carryover of skills greatly improves when traditional PD activities add a coaching component (i.e., follow up support to imbed evidence based practices into the

professional's everyday work) (Batson & Yoder, 2012; Dunn, 2011; Grant, Curtayne, & Burton, 2009; Knight, 2009b). Regardless of discipline, environment or focus, the core elements of effective coaching remain the same. In addition to professional development (both pre- and post-service) some disciplines use coaching in therapeutic interventions with families. Although the focus of this paper will be on coaching as a tool for professional development, we will occasionally reference this literature to illustrate the transferability of the primary coaching elements across disciplines and contexts.

The term coaching is somewhat broad, and interdisciplinary researchers describe effective coaching strategies within their respective fields. Some fields use the general term "coaching." Business and management literature uses the terms "business/managerial coaching" (McCarthy & Milner, 2013) and/or "executive coaching" (Grant et al., 2009). The education literature uses the terms "instructional coaching" (Knight, 2005, 2009a, 2009b) and/or "peer coaching" (Joyce & Showers, 1982; Showers, 1984; Showers & Joyce, 1996). Other coaching terms include "life coaching" (Leo & LifeCoaching.com, 2012) and "job coaching" (U.S. Department of Labor's (DOL) Office of Disability Employment Policy, Job Accommodation Network, Veterans' Employment and Training Service, Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, & Defense and Veterans Brain Injury Center, n.d.). Although each of these iterations of coaching has specific purposes, many share core principles. We will explore these shared elements and their role in coaching as an effective component of PD. For the purposes of this paper, we will use the general term "coaching." When describing participants in the coaching relationship, we will use the terms "coach" (i.e., the person providing guidance) and "coachee" (i.e., the person who receives guidance).

The purpose of this paper is to illustrate how the addition of a coaching component strengthens the effectiveness of traditional PD and results in increased rates of adoption and generalization of skills learned in these activities. We will first explore the process of knowledge acquisition and the underlying principles that govern whether or not professionals adopt a new practice. Next we will discuss how the use of coaching and adult education theory in professional development activities promote carryover of learned skills. We will then summarize the evidence for the use of coaching in professional development as we describe the core elements of effective coaching. We will also discuss additional attributes for consideration when using coaching in professional development.

Knowledge Acquisition and the Adoption of Evidence Based Practices.

This section will explore knowledge acquisition and the process of new evidence becoming accepted as best practice. We will discuss the human response to new and unfamiliar (anomalous) information as well as the foundational concepts for the adoption of new ideas within a system. This process includes understanding the key elements of a given innovation that persuade a group to either accept or reject a new idea. Given the high rate of published studies within the health professions, the lag time between research activities and publication and the lag time between published evidence becoming everyday practice, this information is particularly applicable within the health professions. Understanding these concepts can help professionals integrate current evidence into practice at a more rapid rate.

Chinn and Brewer (1993) describe one framework for how humans respond to new and anomalous data. They describe a continuum of seven responses ranging from completely ignoring new information to a total adoption of the information and change of beliefs surrounding the topic (see Table 1). Chinn and Brewer argue that we all have some response

along this continuum when presented with new and unfamiliar information. Each of us has a set of life experiences and world views that shape our beliefs and perspectives. When presented with new information, this information may fall in line with or contradict our current beliefs, or seem irrelevant to our current beliefs. Regardless of how the new information aligns with current beliefs, humans naturally respond in one of several ways that ultimately predict what they do with the information (Chinn & Brewer, 1993).

Another contributing factor to whether an idea becomes adopted as best practice or not lies in a process Rogers (2003) describes as the diffusion of innovations. Rogers defines diffusion as, “the process in which an innovation is communicated through certain channels over time among the members of a social system” (p. 5). Further, he discusses the rate of adoption of new ideas as, “the relative speed with which an innovation is adopted by members of a social system” (p. 265). In discussing the rate of adoption of an innovation, Rogers identifies several key elements to consider when designing a diffusion plan. These are: relative advantage, compatibility, complexity, trialability and observability. Table 2 provides a brief description of these components. While each of these key elements have their own properties, they all share one critical component: each element contributes to our understanding of how potential users of our practices perceive our ideas (Rogers, 2003). Along similar lines, Knight (2005) suggests that adoption of new practices happens because of two qualities: the practice is more powerful (gives a “relative advantage”) and is easier to use (minimal “complexity”) than their current practices.

Figure 1 represents a hypothesized relationship between Chinn and Brewer’s framework for responses to anomalous data and Rogers’ framework for rate of adoption of a new practice. This relationship is particularly relevant when designing diffusion plans for a new practice (e.g., a new evidence based therapeutic technique). In Chinn and Brewer’s terms, the aim of a potential

diffusion plan would be for professionals to *accept* this new practice and *change* their beliefs about what is the most effective strategy (assuming they are not already using this practice). To promote acceptance and change in belief, we can use Rogers' framework to guide the design of our diffusion plan. In doing so, we would consider the following: can professionals identify the *relative advantages* to adopting the new practice? Can we demonstrate how results from the practice are *observable*? Can the practice itself be *tried* on a limited basis and is it *compatible* with current practices? Finally, we would consider the *complexity* of the new practice.

It is our belief that understanding this process can greatly improve not only the likelihood of adoption, but also the rate at which the adoption occurs. Understanding Chinn and Brewer's framework, better equips us to gauge where professionals stand in their beliefs about the practice we are promoting. Consider the following example in early intervention (EI). In 1997, legislators revised the language within Part C of the Individuals with Disabilities Education Act to mandate that EI services be provided in natural environments rather than in hospitals and clinics or through pull out services (Dunst, Trivette, Humphries, Raab, & Roper, 2001; Hanft & Pilkington, 2000; "Individuals with Disabilities Education Act," 1997). This required professionals to change the focus of their practice from rehabilitation and system based care to habilitation and family centered care. In the face of this drastic change, many professionals were reluctant to adopt this practice (Hanft & Pilkington, 2000). Chinn and Brewer's framework can help us better understand whether professionals who did not adopt this practice were outright ignoring, rejecting, excluding or holding the practice of natural environments in abeyance. Adding Rogers' framework can help us understand why professionals behave the way they do in the face of new evidence. We may find that the professionals do not see a relative advantage to providing services in natural environments. We may find professionals believe that natural

environments are not compatible with their current employment in hospitals or clinics. Whatever the reason, we propose that in most instances, the reason for not adopting a practice can be found in at least one (if not several or all) of Rogers' core elements of rate of adoption.

Having this understanding of how and why professionals respond to new information provides direction on what core elements of adoption to target when designing diffusion plans. For example, we may find that professionals are holding the practice of providing EI in natural environments in abeyance because they do not believe that this practice is compatible with their current jobs (e.g. they work in a hospital). Knowing this, when designing activities to train professionals in the practice, we can incorporate ideas that provide professionals examples of how a hospital based clinician can provide services in a natural environment. More importantly, understanding the relationship between the two frameworks (Rogers and Chinn & Brewer) allows us to anticipate how the professionals may initially respond. This information can help us design diffusion plans that can increase the rate of adoption of new practices. Being able to anticipate how professionals may respond to the practice we are attempting to teach allows us to design more effective diffusion strategies.

Coaching and Adult Education Theory in Professional Development

Before we can expect professionals to adopt a new practice, we must first consider the method we are using to promote and teach that practice (Dunst & Trivette, 2009). Professionals use a variety of methods when designing professional development activities. Billings and Halstead (2009) discuss the application of adult education theory in which adults are self-directed learners who draw on their life and work experiences as the foundation of their learning. These experiences provide a social context for learning and a platform on which to apply new concepts through active learning strategies (Billings & Halstead, 2009). Fink (2003) suggests

that significant adult learning experiences involve participant engagement resulting in lasting change that provides value to the participant. These findings suggest that in addition to describing the practice itself, professional development activities must also actively engage the audience and provide a social context for meaningful application of the new practice.

Coaching is one professional development strategy that relies on research literature from adult learning theory highlighting the importance of drawing on past experiences (Bora, Leaning, Moores, & Roberts, 2010; Reinke, Stormont, Webster-Stratton, Newcomer, & Herman, 2012; Rush & Sheldon, 2011) as well as the importance of environment in considering a coaching strategy (Dunn, 2011; Knight, 2009b; Neuman & Cunningham, 2009; Rush & Sheldon, 2011). Other coaching elements that reflect the application of adult learning theory include reflection, feedback, reciprocal communication, setting goals and progress monitoring (Batson & Yoder, 2012; Bora et al., 2010; Cook & Poole, 2011; Dunn, 2011; Foster, Dunn, & Lawson, 2012; Graham & Rodger, 2010; Grant et al., 2009; Knight, 2009b; Reinke et al., 2012; Rush & Sheldon, 2011; Shermont et al., 2009).

Some research would suggest that successful carryover of strategies from professional development to work environments must include an element of coaching. In a five year study on teacher professional development, Bush (1984) examined the rate of transfer from staff development activities to classroom practice. Breaking the activities into five categories, he found the following respective rates of transfer to the classroom: Workshop Only- 10-12%; Workshop and Modeling-12-13%; Workshop, Modeling and Practice- 14-16%; Workshop, Modeling, Practice and Feedback- 16-19%; and Workshop, Modeling, Practice, Feedback and Peer Coaching- 95%. The addition of peer coaching to other professional development strategies

such as modeling, practice and feedback, significantly impacted whether or not the participants ultimately adopted the practice (Bush, 1984; Knight, 2009a).

In another study, Knight and Cornett (2008) compared teachers who received coaching when taught to use a new instructional strategy (a unit organizer) with teachers who did not receive coaching when taught the same strategy. They found that teachers who received coaching used the new strategy during 90% of the follow up observation visits while teachers who did not receive coaching used the new strategy only 30% of the follow up observations.

Kretlow and Bartholomew (2010) conducted a meta-analysis of literature on coaching in teacher preparation and professional development. Findings from their analysis suggested that one time professional development activities do not effectively support transfer of skill from training to classroom and should include an element of coaching. Additionally, their findings supported existing literature emphasizing the efficacy of ongoing support and training (as in coaching) to improve rates of adoption and implementation of new skills learned (Kretlow & Bartholomew, 2010).

Traditional PD activities consisting of one-time meetings (e.g. lecture, workshop, presentation) may allow learners to explore the relative advantage of the skill being taught as well as the compatibility and complexity of the new skills. However, these PD activities in isolation are insufficient to adopt and implement practices. Coaching, therefore, can support these activities through ongoing, job embedded support.

In summary, effective coaching practices employ the use of adult learning strategies by providing a social context, engaging the learner through active learning and using experiential learning activities. Understanding a social context for newly learned skills and the use of active and experiential learning activities affords learners the opportunity to assess the skill or practice

based on Rogers' framework when making decisions about adopting and implementing new practices. Additionally, including coaching in PD activities significantly increases the carryover of newly learned skills to daily practice and practice environments. Therefore, the use of coaching in conjunction with more traditional PD activities is one way to increase the rate of adoption of new evidence based practices. Understanding the evidence for the use of coaching in professional development, next we will discuss the core components of effective coaching programs.

Core Components of Coaching

This section will explore the core components of coaching by answering the Who, Where, When, What and How of effective coaching practices. Table 3 provides a summary of these core components of effective coaching practices. In answering each of these questions, we will discuss how these core elements may strengthen traditional methods of PD, improve carryover of newly learned skills to daily practice and how these core elements contribute the process of knowledge acquisition and adoption.

Who is involved with coaching practices?

People in coaching relationships might be a peer, a superior or a person brought in to serve as a coach (e.g., consultant) (Dunn, 2011). To illustrate a coaching relationship, consider a speech-language pathologist (SLP) who is interested in learning about visual supports and therefore enlists the coaching services of someone who is more knowledgeable about visual supports. In the course of their conversation, the SLP and the coach discuss how visual supports would make the student's classroom communication more effective. In this instance, the coach might be another SLP, a professional from another discipline, a graduate student or a parent.

Where and when does coaching happen?

Researchers agree that effective professional development is ongoing, job embedded and happens within natural contexts (Dunn, 2011; Guskey & Yoon, 2009; Reinke et al., 2012; Rush & Sheldon, 2011; Shanklin, 2006). Therefore, attending one professional development event is not effective for changing professional practice. However, most traditional PD activities often occur outside of the natural work environment and are one time meetings (Dunst & Raab, 2010; Garet et al., 2001; Guskey & Yoon, 2009).

Reinke et al. (2012) suggest that learning be experiential in nature so that learners may contextualize content. Neuman and Cunningham (2009) emphasized the importance of making the connection between content and context. Learning within a natural environment creates the opportunity for learners to make that connection. Learners see how new skills work, apply them to real life situations and are better able to relate to content; all primary elements of adult education theory and necessary components for effective adult learning (Billings & Halstead, 2009; Fink, 2003). Additionally, naturalistic, on the job learning provides professionals the opportunity to evaluate and compare a new practice's relative advantage, compatibility, complexity, trialability and observability (Rogers, 2003) to the professional's current practice.

What does coaching look like and what does it involve?

The coaching literature identifies a number of elements that contribute to overall effectiveness. Although many of these specific elements are unique to one or several coaching philosophies, several core elements emerge as themes within the literature. Researchers agree that effective coaching is goal oriented, solutions focused and includes some combination of observation, action and feedback (Dunn, 2011; Foster et al., 2012; Grant et al., 2009; Knight, 2009b; Reinke et al., 2012; Rush & Sheldon, 2011). In this section, we will explore these core elements in greater depth and discuss their importance and relevance.

The first core element of coaching is setting goals. The purpose of a coaching relationship is to arrive at some desired goal clearly articulated by the coachee. Coachees do not arbitrarily choose goals, but carefully select and identify goals at the beginning of the coaching relationship (Dunn, 2011; Reinke et al., 2012; Rush & Sheldon, 2011). In setting goals, the coachee has clear direction from the outset to foster improved motivation and accountability (Batson & Yoder, 2012). Additionally, Graham and Rodger (2010) suggest that time spent designing clear goals often has strong implications for achieving outcomes.

In contrast with more traditional models of professional development (e.g. conference presentations or workshops), the person learning a desired skill (i.e., the coachee) sets the goals. In traditional models of professional development, conference presenters generally set goals described as learning objectives (Dunst & Raab, 2010). These objectives are indicators of what the session attendee will learn. However, when PD activities include coaching, the coachee sets goals based on their current set of skills and professional desires (Dunn, 2011; Grant et al., 2009; Shermont et al., 2009). Goals are more individualized, have greater potential to carry more meaning for the learner and are based on the coachee's experiences and ideas rather than being pre-determined as in traditional models of PD (Billings & Halstead, 2009; Dunn, 2011; Fink, 2003). In this way, coaching activities provide increased opportunities to explore the activity's relative advantage, compatibility, complexity, trialability and observability (Rogers, 2003) in relation to current practice activities.

Recent research suggests coaching goals be clear and focused with an emphasis on forward thinking and solutions rather than on problems (Bora et al., 2010; Cook & Poole, 2011; Dunn, 2011; Grant et al., 2009; Rush & Sheldon, 2011). Bora et al. (2010) stress the importance of using past experiences in generating solution focused goals, but cautions coaches and

coachees to not dwell on the past. Using solution based coaching helps maintain focus on specific outcome behaviors rather than on problem situations and minimizes distractions (Bora et al., 2010).

With goals established, professionals can implement observation, action and feedback elements of coaching. Researchers describe the importance of observation at two points. Some researchers suggest that observation happens prior to setting goals, while others suggest using observation as a tool for establishing a baseline skill level after setting goals. Existing evidence suggests that continuous observation, rather than at given points, is essential for ongoing performance evaluation and progress monitoring (Grant et al., 2009; Rush & Sheldon, 2011).

Rush and Sheldon (2011) describe observation as: “examination of another person’s actions or practices to be used to develop new skills, strategies or ideas” (p. 9). As will be discussed in greater depth, coaching relationships are reciprocal in their nature (i.e. coaches and coachees form partnerships with balanced roles). Like the coaching relationship, the observation component of coaching is also reciprocal. Observation can be a coach observing a coachee, a coachee observing a coach or both a coach and coachee observing another person (e.g. another professional). For example, an educator (coachee) may be interested in learning how to incorporate visual supports in her third grade classroom. The educator may enlist the help of a speech-language pathologist (SLP, coach) to learn this skill. During observation, the educator may observe how the SLP implements visual schedules, the SLP may observe the educator implementing visual supports or the educator and SLP may observe another professional (e.g. a special educator) implementing visual supports. In any of these cases, the purpose of observation is to see a behavior or practice in action and gather information to gain insight or monitor progress (Graham & Rodger, 2010; Grant et al., 2009). In general, observation is an information

gathering exercise to guide actions and provide a basis for feedback for participants of coaching sessions.

Rush and Sheldon (2011) describe action as practice opportunities for coachees. These practice sessions may be spontaneous or planned, but give coachees a chance to apply new skills or strategies discussed with coaches (Rush & Sheldon, 2011). More specifically, action plans may include the use of demonstration, modeling and ongoing support to professionals within the working environment (Neuman & Cunningham, 2009; Shanklin, 2006) all of which contribute to effective adult learning (Bernstein, Nelson Burnett, Goodburn, & Savory, 2006; Billings & Halstead, 2009; Fink, 2003). Neuman (1999) used these strategies in a coaching professional development program with early childhood caregivers and found them to be effective tools for improving young children's access to early literacy activities. In this study, literacy specialists worked alongside center based and home based early childhood caregivers. Poglinco and Bach (2004) used in-class modeling, teacher study groups and teacher staff meetings in a study that effectively helped teachers change instructional practices related to literacy. Batson and Yoder (2012) describe role modeling (action) as one of the most empowering attributes in coaching relationships. As evidence has indicated, seeing behaviors in action and having follow-up discussions (i.e., feedback) is crucial to changing professional practices.

Feedback is another essential component in coaching (Batson & Yoder, 2012; Foster et al., 2012; Knight, 2009b; Reinke et al., 2012; Rush & Sheldon, 2011). In traditional PD models, teachers and learners tend to meet on one occasion as opposed to ongoing follow up and dialogue in coaching (Knight, 2009b). Learners may get the opportunity to interact with the teacher, but these interactions are generally not continuous. In some ways these interactions are a one-time opportunity to seek feedback and do not include ongoing support or observation. In coaching,

feedback is ongoing and given frequently throughout the coaching experience over time. The ability to effectively give and receive feedback is an evolving process. As coaches and coachees become more familiar with one another, improved receptiveness to feedback allows for stronger relationships and deeper content focus. In the next section, we will explore such coaching relationships in greater depth.

How does coaching work and how are coaching relationships formed?

Knight (2009a) suggests that for professionals to adopt new practices, learning must be continuous, embedded within daily work activities and include ongoing support. In contrast to traditional PD activities, coaching employs an element of ongoing, job embedded support to learners. Effective ongoing support and interactions require strong relationships to form between a coach and coachee. This coach-coachee relationship is at the core of effective coaching. Within the coaching literature, the concepts of reciprocity and reflection emerge as the two foundational elements of strong coaching relationships. Reciprocity in coaching refers to collaborative relationships where both coaches and coachees benefit from each other's contributions (Knight, 2009b; Reinke et al., 2012). Reflection refers to a process that draws on past experiences while allowing for thoughtful consideration of new ideas (Knight, 2009b; Reinke et al., 2012). Reciprocity is the defining component of the coaching relationship and as a result, the process of reflection gives way to greater outcomes. In this section, we will discuss how reciprocity and reflection foster strong coaching relationships resulting in ongoing, job embedded support to learners.

Traditional PD activities often use an expert-trainer model where the trainer has expertise on a given topic, predetermines content and leads activities that are most often limited to lecturing on the topic (Garet et al., 2001; Guskey & Yoon, 2009). In this type of PD activity,

there is an imbalance in roles. The expert trainer shares the knowledge and resources through one way, lecture style interactions. These activities generally occur in large group and take place outside the work environment. Additionally, this type of PD activity is usually a one-time meeting between the trainer and participant and such activities often do not include a follow up component (Dunst & Raab, 2010; Garet et al., 2001; Knight, 2009b; Kretlow & Bartholomew, 2010). This type of PD allows little time for one-on-one interactions between trainers and learners minimizing opportunities for relationships to form.

In contrast, coaching relies on ongoing, collaborative and reciprocal partnerships between a coach and coachee (Bora et al., 2010; Knight, 2009a; Reinke et al., 2012; Rush & Sheldon, 2011). Meetings occur over time and include joint planning through reciprocal communication (Dunn, 2011; Foster et al., 2012; Rush & Sheldon, 2011). Ongoing interactions provide opportunities to monitor progress and make adjustments to action plans. Reciprocity in these interactions allow both coaches and coachees the opportunity to learn and benefit from each other's' contributions (Knight, 2009b). Researchers indicate that trust, respect and patience promote reciprocity in the coach-coachee relationship (Batson & Yoder, 2012; Cook & Poole, 2011). Others suggest that effective coaching relationships involve equality of roles, choice and voice for both the coach and coachee and information exchange through ongoing mentoring (Graham & Rodger, 2010; Knight, 2009b; Shermont et al., 2009). Equality of roles, in particular, is one feature that sets coaching apart from traditional PD models. Coaches and coachees enter relationships with the expectation of learning from one another through reciprocal information exchange. As coaching relationships develop, mutual trust, respect and patience emerge between coach and coachee creating opportunities for reflection.

Because coaching relationships are partnerships, a coach does not dictate what the coachee will do. Rather, the coach will provide information to the coachee who will subsequently reflect on that information and decide what to do with it. Reciprocal trust and respect allow this process (reflection) to happen (Knight, 2009b).

Reflection helps coachees see the larger picture (Cook & Poole, 2011) and challenge/broaden their current perspectives (Batson & Yoder, 2012) giving greater meaning and context to what coachees learn. This helps coachees align solution focused goals within a broader context. Reflection helps an individual gain greater insight into existing knowledge and skills while finding ways to tweak these skills and work toward goals (Rush & Sheldon, 2011). Like observation, reflection is continuous in coaching. Through reflection, coachees gain insight into existing skills and areas of need to generate individualized goals based on this information (Dunn, 2011). Drawing on the past experiences of both coach and coachee, and identifying existing resources helps give greater meaning to the learning experience (Reinke et al., 2012).

When coachees have difficulty independently generating insights and goals, coaches often use reflective questioning. The purpose of reflective questioning is to help a coachee think about their current situation, what has worked, what has not and what existing resources are available for supporting desired outcomes (Foster et al., 2012). Through reflective questioning, a coach facilitates a coachee's self-assessment and discovery rather than simply giving information or supplying a solution. This process promotes greater independence in the coachee.

Ongoing interaction and a strong relationship between coaches and coachees are essential for coaching to be successful. Through such interaction, professionals are able to explore within themselves and their coaching partners how they feel about the new practice or skill. Because coaching and other adult learning activities provide participants opportunities to explore the

relative advantage, compatibility, complexity, trialability and observability (Rogers, 2003) of a given practice, professionals are better equipped to make informed decisions about that practice.

Conclusion

The importance of closing the research to practice gap through effective PD is clear. Years of research suggests that traditional methods of PD (e.g. one hour lectures, day long workshops or week long trainings) are ineffective with regard to carryover of skills from PD activities (that provide training on new effective practices) to everyday practices. We summarized one framework of explaining knowledge acquisition and potential contributions to the adoption of new evidence-based practices as “best practices.” We argue that considering these aspects in the design of professional development activities can greatly enhance their impact. Further, evidence supports the use of coaching as one strategy for strengthening professional development activities. Adding a coaching component to traditional forms of professional development greatly improves the carryover of learned strategies to every day practice. Core elements of effective coaching practices from a variety of disciplines (i.e. education, nursing, medicine, psychology, occupational therapy) can serve as a set of skills for professionals to consider as they design future professional development activities.

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Table 1

Chinn and Brewer's Framework of Handling Anomalous Data

Response to Anomalous Data	Definition
Ignore	Individual “does not even bother to explain the data away” (p. 4)
Reject	Individual “can articulate an explanation for why the data should be rejected” (p. 6)
Exclude	Individual claims “the data to be outside the domain” of the existing theory (p. 7)
Hold in Abeyance	Individual sets the data aside and “promises to deal with it later” (p. 9)
Reinterpret	Individual “accepts the data as something that should be explained by his theory...but at a theoretical level, they give different interpretations of the data” (p. 9)
Peripheral Changes	Individual “clearly accepts the data but is unwilling to give up theory A and accept Theory B” (p. 10)
Accept	Individual “accepts the new data and explains it by changing the core beliefs of theory A or accepting an alternate theory” (p. 11)

Chinn, C. A., & Brewer, W. F. (1993). The Role of Anomalous Data in Knowledge Acquisition: A Theoretical Framework and Implications for Science Instruction. *Review of Educational Research*, 63(1), 1-49. doi: 10.3102/00346543063001001



Table 2

Rogers' Core Contributing Elements to the Rate of Adoption of a Given Innovation

Core Element	Description
Relative Advantage	"the degree to which an innovation is perceived as better than the idea it supersedes" (p. 265)
Compatibility	"the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters" (p. 266)
Observability	"the degree to which the results of an innovation are visible to others" (p. 266)
Trialability	"the degree to which an innovation may be experimented with on a limited basis" (p. 266)
Complexity	"the degree to which an innovation is perceived as relatively difficult to understand and to use" (p. 266)

Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York: Free Press.

Figure 1

	Ignore	Reject	Exclude	Hold In Abeyance	Reinterpret	Peripheral Changes	Accept
							
Relative Advantage	As the RELATIVE ADVANTAGE increases, the likelihood of Acceptance and rate of adoption increases						
Observability	As the OBSERVABILITY increases, the likelihood of Acceptance and rate of adoption increases						
Compatibility	As the COMPATIBILITY increases, the likelihood of Acceptance and rate of adoption increases						
Trialability	As the TRIALABILITY increases, the likelihood of Acceptance and rate of adoption increases						
							
Complexity	As the COMPLEXITY increases the likelihood of Acceptance and rate of adoption decreases						

Chinn, C. A., & Brewer, W. F. (1993). The Role of Anomalous Data in Knowledge Acquisition: A Theoretical Framework and Implications for Science Instruction. *Review of Educational Research*, 63(1), 1-49. doi: 10.3102/00346543063001001

Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York: Free Press.

Table 3

Core Components of Effective Coaching Practices

	Description
Who?	Coaches and Coachees may be: Professionals Peers Consultants Students
When & Where?	Coaching: Is ongoing Is job embedded Happens in natural contexts
What?	Coaching: Is goal oriented Is solutions focused Includes observation, action and feedback
How?	Coaches and Coachees: Engage in ongoing dialogue and joint planning Employ reciprocal communication Share roles Are collaborative, trusting and respectful Self-reflect and assess to identify goals and solutions

Appendix J

A Pilot Study on Professional Documentation: Do We Write from a Strengths Perspective?

A Pilot Study on Professional Documentation: Do We Write from a Strengths Perspective?

Matthew J. Braun, MA

Comprehensive Examination 3

Abstract

There is growing evidence supporting the use of strengths based practices when serving families. The purpose of this study was to examine the use of strengths based approaches in the context of written professional documentation. Specifically, we explored whether or not interdisciplinary clinicians in one university based medical center clinic write from a strengths perspective when documenting child behavior in autism diagnostic clinics. We gathered narrative based writing samples (total of 299 phrases) from 20 patient reports. Using a coding system developed by the research team (ICC=.801 on final definitions and coding system), we analyzed the nature with which interdisciplinary clinicians included strengths based language in their written documentation. An independent researcher coded a random sample (20% of entire sample) of the data to document reliability of the coded data (97% inter-rater agreement). Our findings indicated that clinicians in our study use deficit based language significantly more than neutral and strengths based language in written documentation. This preliminary evidence suggests a need to reflect upon our own understanding of strengths based practices and the way professionals write about children in clinical documentation.

Background and Significance

The idea of “family centered care” first appeared in the 1950’s (Saleebey, 2009; Weick, Rapp, Sullivan, & Kisthardt, 1989). Over the next four decades the definition and understanding of “family centered care” evolved first through the Healthy People initiative (Healthy People 1990, 2000, 2010 and 2020) and then subsequently through the visions of national programs and organizations such as the American Occupational Therapy Association, the American Speech-Language Hearing Association, the Committee on Hospital Care & Institute for Patient and Family-Centered Care, and the National Center for Family Centered Care (United States. Public Health Service. Office of the Surgeon General & United States. Public Health Service. Office of the Assistant Secretary for Health, 1979). Although no one universal definition of family centered care exists, there appears to be agreement among these organizations as to the core elements constituting family centered care. Included among these are:

- Respect for all team members (including families as team members)
- A focus on family strengths and resources
- Cultural competence
- A balanced relationship between providers and families

(American Occupational Therapy Association, 2010; American Speech-Language Hearing Association, 2008; Committee on Hospital Care & Institute for Patient and Family-Centered Care, 2003, 2012; National Center for Family Centered Care, 1989).

These primary elements of family centered care have emerged as the core principles of strengths based practices and serve as the basis for several emerging fields of study. Some of these include: the Strengths Perspective (Saleebey, 2009), Positive Psychology (Seligman & Csikszentmihalyi, 2000), and Positive Deviance (Lindberg & Clancy, 2010). Each of these fields

has growing evidence for the use of strengths based practices when serving families. Some of the documented outcomes include: improving the balance in the provider-family relationships (Gallagher, Rhodes, & Darling, 2004), improving family perceptions of their child with special needs (Carlson, Armitstead, Rodger, & Liddle, 2010; King et al., 2006; Law et al., 2003), improving parent child relationships (Steiner, 2011), positive effects on challenging behavior, academics and family functioning (Kuhlthau et al., 2011; Kuo, Bird, & Tilford, 2011; Stormshak, Connell, & Dishion, 2009), improvements in self-esteem and positive affect (Wood, Linley, Maltby, Kashdan, & Hurling, 2011), and improving nutrition in young children and overall quality of health care in medical institutions (Bradley et al., 2009; Mackintosh, Marsh, & Schroeder, 2002).

One particular study (Steiner, 2011) analyzed the words early intervention providers used when describing children to their parents. In one condition, providers used strengths based language and in another condition, providers used deficit based language. Steiner found the use of this strengths based approach improved parent affect toward their children and strengthened parent child interactions. As a result, Steiner concluded that such approaches may contribute to alleviating stress and help families more easily cope with the stress that comes with raising a child with a disability.

Given the profound effect that a provider's words can have on how parents relate to their children, this study is a first step in exploring the utilization of strengths based practices in the context of written documentation, specifically autism diagnostic reports. The purpose of this study was to gather pilot data about how interdisciplinary providers write about children in autism diagnostic reports.

Specific Aim and Hypothesis

The purpose of this study was to explore the way interdisciplinary clinicians describe child behaviors observed during autism diagnostic clinical evaluations at the Center for Child Health and Development. Specifically, we aimed to gather information about the extent to which interdisciplinary clinicians write from an ability perspective using strengths based language.

Methods

Study Design

This descriptive study was a retrospective analysis of existing patient reports at the Center for Child Health and Development (CCHD) at the University of Kansas Medical Center (KUMC). We analyzed anecdotal behavior observation sections from interdisciplinary diagnostic patient reports using definitions and a coding system developed by the research team. We randomly selected a convenience sample of patient reports from a variety of autism diagnostic teams at the CCHD.

Operationalizing Definitions of Strengths and Deficit Based Language

To operationalize the definition of strengths based language and what it means to write from an ability perspective, we developed definitions and subsequently a coding system based on these definitions (see Table 1 and Figure 1). We used this coding system to rate phrases from anecdotal behavioral observation sections of interdisciplinary autism diagnostic reports. To establish reliable definitions/codes, we generated baseline definitions, and then recruited a cohort of eight interdisciplinary doctoral students (most of whom are practicing professionals) to test the definitions/codes by rating several samples of clinical reports. After each round of practice ratings, we adjusted the definitions/codes based on cohort feedback and data analysis. We also recruited three parents of children with special needs to complete one round of practice ratings

and gathered anecdotal feedback to inform the final iteration of definitions/codes. We analyzed the data of the final sample of ratings from the eight provider cohort using an Intra-class Correlation Coefficient. We found an ICC = .801 indicating strong overall reliability of our final definitions and coding system.

Selection Criteria and De-Identifying the Sample

We obtained a convenience sample of 299 phrases for coding and analysis. A study coordinator (who did not participate in the coding of data) randomly selected 20 patient reports (5 reports from each of the various 4 autism diagnostic clinics) from the autism diagnostic clinics dated between January 1, 2013 and August 31, 2013. We used the Behavioral Observation section which is a narrative section based on the clinician observation of the child during the evaluation. Each of these sections was approximately 10-20 phrases in length. From each report, we copied and pasted the behavior section into a new Word document. The study coordinator de-identified each sample by changing the names and any other identifiable information. Once de-identified, no link between the sample for analysis and the patient reports existed. We transferred de-identified samples into one Excel worksheet broken down by phrase with each phrase separated from the next on a subsequent line. We randomly sorted (2 times) the entire sample of phrases so as not to provide a context that may influence ratings for subsequent or previous phrases. Randomly sorting phrases also protected the anonymity of the professional who wrote the reports.

Data Collection and Analysis

Once randomly sorted, the primary investigator assigned a rating to each of the phrases in the sample. First we calculated the frequency of each code (*D*, *IN*, *I+*, *I-*), then completed a Chi Square analysis comparing our observed frequencies of codes to our expected frequencies of

codes. This allowed us to determine if significant differences existed within the frequency distributions of the codes in our sample. In determining the expected frequency for each individual code, we believed that the expected values should not be based on chance probability (25% for each code) alone. Instead, we believed that writing from a strengths perspective would mean significantly more positive (I+) and neutral (IN and D) statements than negative statements (I-). We considered using more stringent expected values (e.g. 10% I-, 90% positive or neutral), but given the limited literature on this topic, we decided to use a more conservative set of expected values (e.g. 25% I-, 37.5% I+, 18.75% IN and 18.75% D). These values suggest that we would expect 75% of the phrases in strengths based writing samples to be positive or neutral in their nature and 25% of the phrases in the sample to be negative in their nature.

Because a Chi Square analysis does not identify which categories are responsible for significant differences, we also completed One Sample Binomial post hoc comparisons. In doing so, we made pairwise comparisons of the distribution of each unique code. Having four unique codes required six pairwise comparisons. To account for these multiple analyses, we used a Bonferroni adjustment ($.05/6 \text{ tests} = .0083$) in the post hoc analysis.

Results

Table 2 and Figure 2 provide frequency data of the observed and expected frequencies and Table 3 provides results from the statistical analysis. Findings from our analysis indicate 39% of statements were Interpretive, Negative (I-), 25% were Interpretive, Positive (I+), 16% were Interpretive, Neutral (IN) and 20% were Descriptive (D). To ensure reliability of the final coding, a third member of the research team independently rated every fifth data point (20%) of the randomly sorted sample of 299 total phrases (60 phrases). We established an 80% agreement criterion; the two researchers agreed on 58 of the 60 phrases (97%) selected for reliability.

The Chi Square Analysis indicated a significant difference, $\chi^2(3, N = 299) = 36.114$, $p < .001$ in the distribution of the codes in the sample from that of the expected distribution. These findings suggest that one or more of the observed codes occurred significantly more or less than the expected frequency. To determine which code(s) was responsible for the difference in distribution, we completed a post hoc analysis. Binomial pairwise comparisons that included the I- code were significantly different (with the I- frequencies being higher) from all the other categories. In contrast, all other pairwise comparisons (I+/D, I+/IN, IN/D) were not significantly different. These findings indicate that in our sample, the I- code occurred significantly more than any other code and there were no significant differences in the amount with which the other codes (D, IN, I+) occurred. These findings suggest that authors of diagnostic reports in our sample used phrases that were Interpretive and Negative significantly more than other types of statements.

Discussion

The evidence for the effectiveness of strengths based approaches to serving families is well documented (Blundo, 2009; Saleebey, 2009; Weick, Kreider, & Chamberlain, 2009). By focusing on strengths, we shift the starting point of care from problems (or deficits) to strengths and abilities. Steiner (2011) applied a strengths based approach to the language professionals use when talking with families. She found that using strengths based language (as opposed to deficit based language) in describing children to their families greatly improved overall outcomes. As a first step in expanding these findings to the written language professionals use in clinical reports, the current study explored how interdisciplinary clinicians write autism diagnostic reports. Despite existing evidence for the use of strengths based approaches to care, our findings suggest that professionals continue to write from a deficit perspective significantly

more than they do a strengths perspective. These findings also suggest a need to provide further training on how to write clinical documentation from a strengths perspective. This will require clinicians to have a foundational understanding of strengths based approaches to care and be intentional in implementing the practices in their writing.

In designing the current study, the researchers operated on the primary assumption that professionals believe they function (and subsequently write) from a strengths perspective. Our findings, however, suggest that even though clinicians may believe they operate from a strengths perspective, they may not fully grasp the concept of strengths based approaches. For example, clinicians may identify strengths and resources during a diagnostic evaluation, yet make intervention and programming recommendations around a specified diagnosis with little consideration for the identified strengths or family priorities. In this scenario, the starting point of care continues to be a diagnosed condition rather than the individual and their existing abilities, strengths and resources. We are not suggesting that providers ignore diagnostic criteria and/or impairments. However, by shifting the focus of care from a diagnosis to individuals and their abilities, we draw upon existing strengths and resources to more naturally support identified impairments. This model of care better reflects the evidence about strengths based practices.

To move toward more strengths based approaches, professionals need a better understanding of why deficit based practices continue to be the primary method of service delivery. Braun, Dunn, and Tomchek (2014a) described how deficit based thinking continues to exist at each of the three primary levels of service delivery (Systems level, Practice level, and Pre- and Post- Service Training levels) and how we might promote more strengths based thinking at each of these levels. Diagnostic criteria/manuals and reimbursement systems require providers to identify specific deficits and conditions requiring little or no identification of

strengths and abilities. Reimbursement for services rendered subsequently requires documentation based on deficits and identified conditions. As a result, training (both pre- and post- service) often focuses on how to design plans of care and document services from a deficit perspective. Although strengths based services are becoming recognized as best practice, until these practices are fully understood and adopted at each of the primary levels of service delivery, we cannot assume that strengths based approaches are being utilized.

As is true with the diffusion of any new practice, we must consider how we provide training on the practice as a crucial aspect of its implementation (Carl J. Dunst & Trivette, 2009). Therefore, we must consider the method we are using when promoting the adoption of strengths based practices. Years of research indicates that traditional methods of professional development such as one hour lectures, day long workshops and week-long trainings are ineffective with respect to the carryover of skills from professional development activities to everyday practice (Ball & Cohen, 1999; Birman, Desimone, Porter, & Garet, 2000; Bruder, Mogro-Wilson, Stayton, & Dietrich, 2009; Robert N. Bush, 1984; R.N. Bush, 1984; Carl J Dunst & Raab, 2010; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey & Yoon, 2009; Kontos, Howes, & Galinsky, 1996; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Adding a coaching component to traditional forms of professional development activities greatly improves carryover of knowledge and skills to everyday practice (Birman et al., 2000; Robert N. Bush, 1984; Garet et al., 2001; Guskey & Yoon, 2009; Kretlow & Bartholomew, 2010; Kretlow, Cooke, & Wood, 2011). Consistent with adult learning theory, effective professional development activities are ongoing, job embedded and occur within the natural context. Coaching practices are goal oriented, solution focused and include observation, action and feedback (Dunn, 2011; Foster, Dunn, & Lawson, 2012; Grant, Curtayne, & Burton, 2009; Guskey & Yoon, 2009; Knight,

2009a, 2009b; Reinke, Stormont, Webster-Stratton, Newcomer, & Herman, 2012; Rush & Sheldon, 2011; Shanklin, 2006). By incorporating coaching practices into professional development activities focused on strengths based practices we can expect to see a higher rate of adoption of such practices (Braun, Dunn, & Tomchek, 2014b).

To fully implement strengths based practices, professional development activities would logically include active learning strategies aimed at writing from a strengths and abilities perspective for the individuals and families we serve. Findings from our study can guide the development of useful strategies for clinicians to use in the clinical documentation process. For example, considering the ratio of negative statements to positive and neutral statements may help clinicians become more aware of how they write. The expected values in our chi square analysis provide one framework for how clinicians might evaluate the extent to which they write from a strengths perspective. Using our coding algorithm, clinicians just learning to write from a strengths perspective might use the expected values we used in this study (25% negative, 75% positive or neutral) with a goal of achieving a more stringent criteria (10% negative, 90% positive or neutral) as they gain experience. Clinicians could also use our coding algorithm (see Figure 1) to generate questions about their writing. For example, “Did I use objective statements that do not assign meaning to or interpret a behavior?” If the writing is interpretive in nature, “Did I describe the behavior in a way that is either neutral or positive and free of negative language?”

Learning new strategies takes practice. We have provided two strategies to help clinicians as they make the transition to more strengths based approaches in their writing. In addition to these strategies, Table 4 provides side by side examples of what strengths based writing does and does not look like. We provided several examples of each type of statement (positive, negative,

neutral and descriptive). These examples illustrate how we can write from a strengths perspective yet still document behaviors necessary to support a diagnosis. In writing from a strengths and abilities perspective, we write in a manner that is neutral and positive, limiting the extent to which we emphasize deficits in our interpretation of observed behaviors. If our writing projects our own interpretation rather than an objective viewpoint, we run the risk of documentation being taken out of context and perhaps misinterpreted. Further, when we focus on deficits, we often neglect the dignity of the individuals we serve. Writing from a strengths perspective preserves that dignity and maintains respect for all of the individuals and families we serve.

Conclusion and Future Directions

In conclusion, findings from our pilot study provide preliminary evidence for a need to adjust the way in which clinicians write about children in their diagnostic reports if we are to reflect the evidence about strengths based approaches. This will require a greater understanding of strengths based approaches including the ability to apply a strengths perspective when writing.

We acknowledge several limitations to the current study. Although the sample of reports that we analyzed came from a variety of interdisciplinary clinicians, this convenience sample came from one clinic and may not be generalizable to the entire population of autism diagnosticians. The fact that this sample included clinicians who work primarily as autism diagnosticians also limits the generalizability of our findings to other interdisciplinary clinicians.

To our knowledge, this study is the first of its kind with respect to analyzing strengths based writing. Therefore, the criteria we used when setting our expected values for the chi square analysis may be considered by some to be conservative in its nature. Even given the conservative nature of these levels, our findings are indicative of higher levels of negative statements than

positive and neutral statements. Future studies may choose to use more stringent criteria when designing similar studies.

Finally, all of the writing analyzed in this study came from clinical documentation about children suspected of having autism. Our findings suggest that diagnosticians may have a tendency to write more from a deficit perspective than that of a strengths perspective because of diagnostic criteria. Future research might include clinical documentation of well child visits or other written documentation of general observations of children who are not suspected of having autism or another diagnosed condition. Such research might help discern whether clinicians are biased simply by knowing that there is a suspected “condition.” Analysis of general observations of children not suspected of some “condition” might also help determine whether or not clinicians tend to think more from a deficit perspective than a strengths perspective. This data could provide valuable insight about where we need to focus our training efforts.

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Table 1

Definitions and Coding System

Term (Code)	Definition	Example
<i>Descriptive (D)</i>	Objectively describes what the child or family says or does OR what the clinician observes.	The child entered the room and sat down at the table.
	Factual information absent of subtle or vague quantitative interpretation (e.g. some, a few, occasionally).	The child's mother and stepfather accompanied him to the appointment
	Includes no qualitative interpretation (e.g. slight, brief, small)	Tommy kicked his mother three times.
	Distinctly reports what the family says about child, (e.g. "Max's mother reports that he is generally a happy child.")	Jason's mother reports that he is often shy and slow to warm up. (While the mother's comments may suggest I-, this is descriptive because it is describing what a parent said.)
<i>Interpretive</i>	Describes a child's behavior or clinician observation in a way that subjectively assigns meaning or interprets the behavior to mean something.	Matt frequently looked to the examiner for comfort.
	May include subtle quantitative (e.g. some, a few, several) or qualitative interpretations (e.g. small, brief, strange, unusual)	Keenan threw his pencil to get out of his work.
	Interpretive statements often include one term that differentiates it from a descriptive statement. (For example: Julie willingly participated in all assessment activities. "willingly" makes this statement interpretive.)	It was difficult to engage Evan in any of the assessment activities.
		On some occasions, Michael used good eye contact.
		Steve was easily redirected.
<i>Interpretive Positive (I+)</i>	Assigns meaning to the behavior in way that suggest the behavior to be a child/family strength or positive attribute	Angela easily transitioned from the waiting room to the assessment room.

	Describes the child or family from an ability perspective.	<p>Julie was easily redirected to tasks.</p> <p>Anna was polite and cooperative throughout the assessment.</p> <p>Jenna willingly participated in all activities of the assessment.</p>
<i>Interpretive Negative (I-)</i>	<p>Assigns meaning to a behavior or observation in a way that suggests the behavior is a deficit, problem or is concerning.</p> <p>OR</p> <p>Describes a behavior in the context of a disability rather than ability</p>	<p>...although her overall rate of social initiation was significantly decreased.</p> <p>...but rarely directed verbalizations toward her parents or the examiners.</p> <p>Emily was generally unable to follow simple directions.</p> <p>Jamie was not observed to use words throughout the assessment. (A strengths based way to restate this would be: Jamie communicated through the use of nonverbal communication and her assistive device.)</p>
<i>Interpretive Neutral (IN)</i>	<p>Provides subtle quantification (non-numeric such as a few, some) or qualitative interpretation (e.g. good, brief, slight) without suggesting the behavior to be a strength, deficit, problem or concern.</p> <p>May be interpreted by some as a strength or by others a deficit</p> <p>May be interpreted as either</p>	<p>Michael cried to express that he was sad.</p> <p>He exhibited a partial smile during the balloon activity.</p> <p>His language was a combination meaningful speech and repeated words.</p>

positive or negative or may be interpreted as neither positive nor negative. May include language that to some is technical jargon and to others is professional language, but does not assign suggest a deficit or strength (e.g. mixing word and word approximations with jargon and babble.)

Figure 1 *Coding Algorithm*

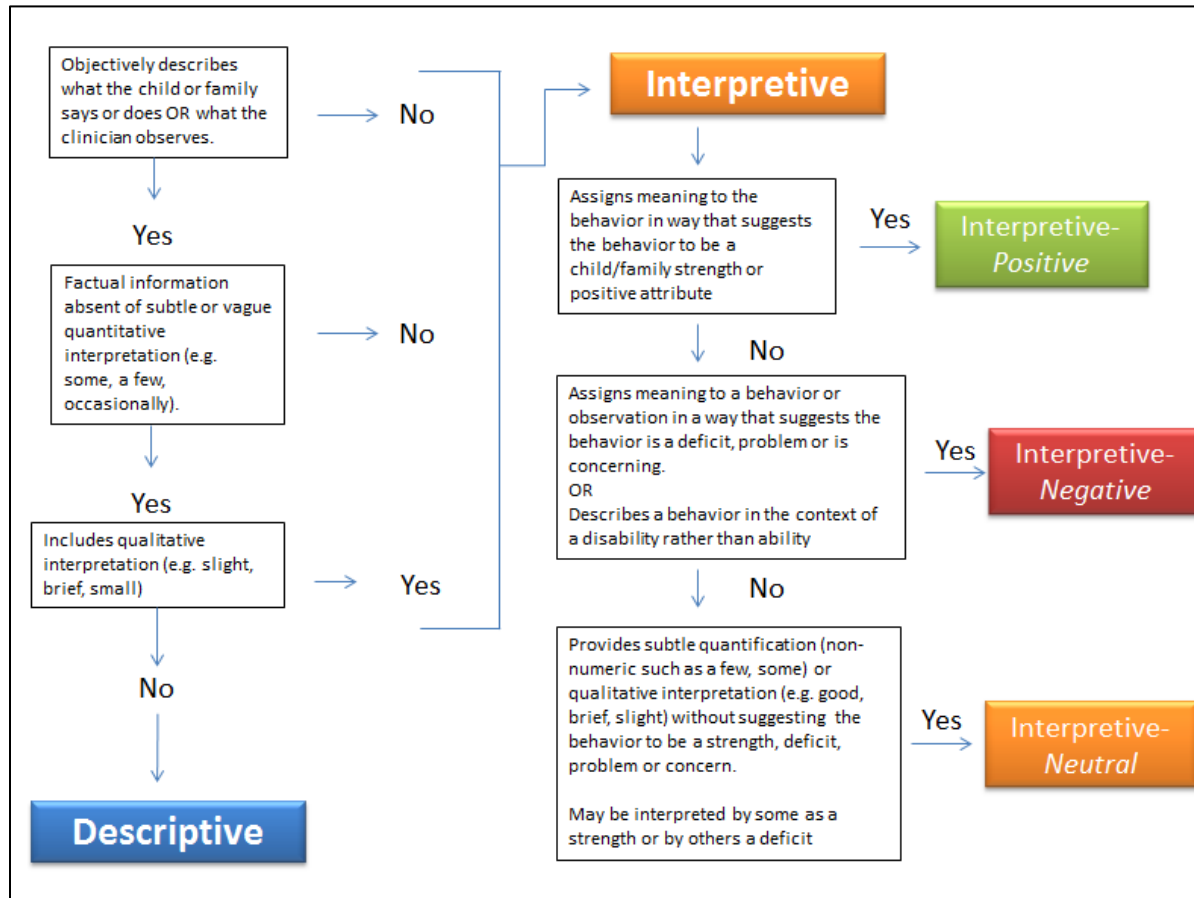


Table 2

<i>Frequency Data</i>					
	I+	IN	D	I-	Total
Expected	112(37.5%)	56 (18.75%)	56 (18.75%)	75(25%)	299(100%)
Observed	76 (25%)	47(16%)	60(20%)	116(39%)	299(100%)

Figure 2
Frequency Data

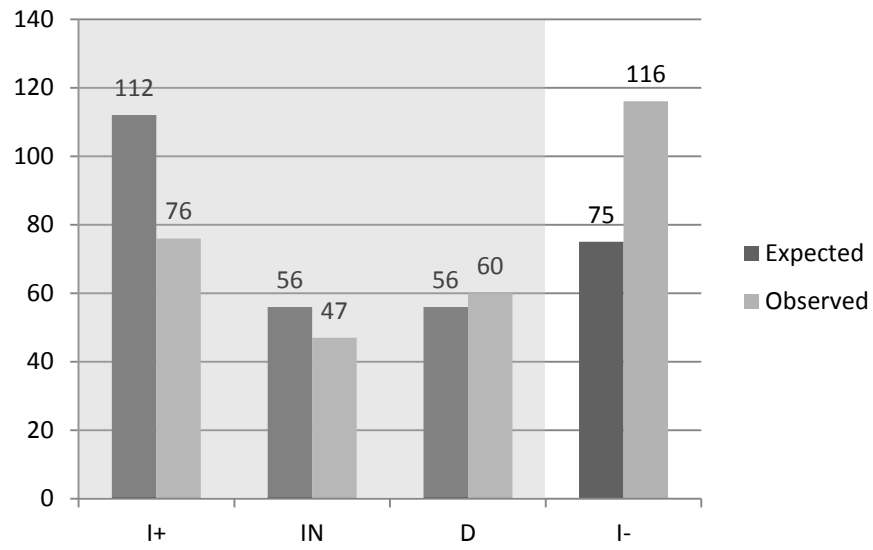


Table 3

Data Analysis

Chi Square	<i>df</i>	<i>P</i>		
36.144	3	< .001*		
*Indicates significant differences at p < .05				
One Sample Binomial Comparisons				
	I+	IN	D	I-
I+	-	-	-	-
IN	.012	-	-	-
D	.198	.246	-	-
I-	.005**	< .001**	< .001**	-

**Indicates significant difference at $p < .0083$; $\alpha = .0083$ after Bonferroni correction (.05/6 tests)

Table 4

Suggestions for Strengths Based Writing

Doesn't Look Like...	Looks Like...
He was very impulsive in the waiting area. [I-]	He hit his sister twice and threw a book at his mother [D]
Daisy had a great deal of difficulty sitting during the evaluation. [I-]	Throughout the evaluation, Daisy frequently got up from her seat. [IN]
During the evaluation, Raphael had poor eye contact [I-]	During the evaluation, Raphael did not make eye contact with the examiner [D]
Social interactions were difficult.[I-]	Bob responded questions and comments. He did not make comments or ask the examiner questions. [D]
He maintained good eye contact with the examiner, but was very limited in his other nonverbal skills. [I-]	He maintained good eye contact with the examiner. [I+] He used several conventional gestures, but did not use descriptive gestures. [IN] He used happy and sad facial expressions on several occasions. [IN]